



JOURNAL
OF
THE MILITARY SERVICE INSTITUTION
OF THE
UNITED STATES.

VOL. X.

MARCH, 1889.

NO. XXXVII.

Prize Essay.

ORGANIZATION AND TRAINING OF A NATIONAL
RESERVE FOR MILITARY SERVICE.

By FIRST LIEUT. A. C. SHARPE, U. S. A.,
TWENTY-SECOND INFANTRY.

*"The legacy that will be left by such men as Sheridan, Grant, Sherman and Lee is this: that volunteers may be trusted, but it is madness to leave them untrained and unprepared."**

INTRODUCTORY.

IN the ancient monarchies of Europe, the manners and customs of the times sufficiently prepared the great body of the people for War. Every citizen was a soldier, as the exigencies of the State demanded. Each one provided his own arms and maintained himself without expense to the Crown. Military weapons were rude and simple, and skill in their use was readily acquired. In Greece and Rome military training was made a necessary part of the education of the youth and imposed by the State upon every free citizen. We discover also in the Feudal governments, which arose upon the ruins of the Roman Empire, many similar ordinances for the encouragement of skill in archery and other martial exercises. And although military training seems to have gradually gone into disuse among

* *London Globe*, on the death of Gen. Sheridan, Aug. 7, 1888.

the great body of the people, the universal obligation to military duty was never relaxed as a fundamental principle of government. In the earliest colonial charters we find it provided that "the inhabitants and free men above seventeen years of age and under sixty, shall be bound to bear arms and serve as soldiers whenever the grand council shall find it necessary."¹ But with the increasing population and development of the industrial arts, together with the resulting division of labor and the more careful and laborious training required to prepare for War, it became manifestly impracticable to train the whole people. However natural and just it might appear that all should be liable to military service, expediency demanded that a portion only should be selected for this necessary public duty, and that while thus withdrawn from the productive resources of the country, the burden of their maintenance should be borne by those who were exempted. Thus conscription, although exceedingly repugnant to a free people, became the truly democratic mode of raising an army. In England and among the Anglo-American colonists, the memory of Charles the First and of the Long Parliament, had possessed the people with an overmastering dread of a standing army and the subsequent oppressive measures of the home government, which finally culminated in the great uprising of '76, confirmed their descendants in this deep-rooted antipathy. The quartering of troops upon them, without their consent, was by no means the least of the grievances complained of in the Declaration of Independence. The conscriptive system, however, proved, in the long struggle which followed, to be utterly unreliable and ineffective. Washington repeatedly inveighed against it, and General Lee, in a letter to James Bowdoin, President of the Council of Massachusetts, wrote as early as November, 1776, "As to your Militia, they are grown more detestable than ever."² The necessity for a more permanent military establishment was manifest to every officer of the Revolution, but when confronted with the alternative of a militia or a standing army, the people unhesitatingly chose the former, and although we perceive nothing in the written Constitution then framed, or in the amendments subsequently added, which imposes the least restraint upon the creation and development of a standing army, the material augmentation of that force in time of Peace is an event which the youngest among us can scarcely expect to see. Success in several wars, however providentially achieved and at

—no matter what—cost, has inflated us with an overweening sense of security and invincibility. Matthew Arnold pronounced us the most boastful people in the world,³ and the words of De Tocqueville may be applied with equal force: "No nation was ever more prodigal of self-applause; no people ever better satisfied with themselves." While it is therefore true, as the last-named writer observes, that "a democratic people is led by its own tastes to centralize its Government," and that its leaders "will labor unceasingly to extend the powers of government," we may for that very reason always anticipate the opposition of a formidable minority—expressing the fears and prejudices of the people—ever actively imposing a wholesome restraint. The effect of the great Rebellion has certainly been an increasing tendency towards strong government, yet the *posse comitatus* act of 1878 shows how sensitive the people are to the most distant encroachments of executive power.

We may assume, therefore, at the outset, and without reference to the powers and limitations prescribed by the Constitution, that the creation by Congress of a powerful effective National Reserve Force will be hedged about with many jealous provisos and its availability to the Executive authority made dependent upon what at least appears to be remote and improbable contingencies. Bearing in mind, then, the two fundamental political maxims which our people never weary of repeating, that a standing army is dangerous to the liberties of the Republic, and that a well-regulated militia is necessary to the security of a free State, let us proceed to a statement of the Constitutional powers and limitations under and within which a National Reserve may be organized and trained.

CONSTITUTIONAL PROVISIONS.

The Constitutional provisions affecting the subject under consideration are the following:

To raise and support armies, but no appropriation of money to that use shall be for a longer term than two years.

To make rules for the government and regulation of the land and naval forces.

To provide for calling forth the militia to execute the laws of the Union, suppress insurrections and repel invasions.

To provide for organizing, arming and disciplining the militia and for governing such part of them as may be employed in the service of the United States, reserving to the States respectively the appointment of the officers and the authority of training the militia according to the discipline prescribed by Congress.

To make all laws which shall be necessary and proper for carrying into execution the foregoing powers, and other powers vested by this Constitution in the Government of the U. S., or in any department or officer thereof. (Article 1, Section 8.)

No State shall, without the consent of Congress, keep troops or ships of war in time of Peace, or engage in War unless actually invaded, or in such imminent danger as will not admit of delay. (Article 1, Section 10.)

The President shall be Commander-in-Chief of the Army and Navy of the United States, and of the militia of the several States when called into the actual service of the U. S. (Article 2, Section 2.)

The United States shall guarantee to every State in this Union a Republican form of government and shall protect each of them against invasion, and on application of the Legislature or the Executive (when the Legislature cannot be convened) against domestic violence. (Article 4, Section 4.)

A well-regulated militia being necessary to the security of a free State, the right of the people to keep and bear arms shall not be infringed. (2d Amendment.)

No soldier shall in time of Peace be quartered in any house without the consent of the owner nor in time of War, but in a manner to be prescribed by law. (3d Amendment.)

RETROSPECTIVE.

Before entering upon the discussion of any plan for the future, it may not be without advantage to look to the past and to inquire briefly what, if anything, has been done or projected, by those who have gone before us, looking to the formation of a National Reserve.

The Constitution of the United States was framed one hundred years ago. In ten years prior to that event, the Union had existed as a confederation of sovereign States, bound together by a veritable rope of sand. No provision had been made by the articles of confederation for enrolling or calling forth the Militia, which proved to be an omission seriously felt. Our population at that time was sparse and our frontier exposed to the incursions of numerous powerful tribes of Indians. There was also cause to apprehend that serious dissensions with England might be renewed in consequence of unsettled questions still pending between the two countries. Seeing that there was an insuperable aversion on the part of the people to maintaining a regular army, President Washington took repeated occasion to impress on Congress the necessity of organizing a reserve force without further delay. In his speech at the opening of the second session, he said that, "among the interesting objects that should engage the attention of Congress, that of providing for the common defense would merit its particular regard. To be prepared for War is one of the most effectual means of preserving Peace." Under the Articles of Confederation, the Congress by resolutions

of April 12, 1785, and October 3, 1787, had created and continued a military peace force for service against Indians, and by one of the earliest acts of the First Congress (Sept. 29, 1789), the establishment of 1787, "except as to the mode of appointing officers, was recognized to be the establishment for the troops in the service of the United States." By this Act also, the President was "authorized to call into service from time to time such part of the Militia of the States, respectively, as he may judge necessary for the purpose aforesaid" (*i. e.* for protection against Indians). But this act was "to continue in force until the end of the next session of Congress, and no longer." These temporary expedients, however, proved entirely unsatisfactory, and notwithstanding the extreme caution which characterized the military legislation of the time, an act was finally passed on the 30th of April, 1790, which repealed the former statutes and substituted a force of 1216 men, exclusive of officers, to be organized into one regiment of infantry and a battalion of artillery. This was the beginning of the Regular Army. This Act retained the provision of the old law for calling forth the Militia, but it was not until two years later (May 8, 1792,) that the first bill was passed for the general military training of the people. It was provided by this statute that "each and every free, able-bodied, white, male citizen of the respective States, resident therein, who is or shall be of the age of 18 years and under the age of 45 years (except as hereinafter excepted), shall severally and respectively be enrolled in the Militia." The method of the enrollment was prescribed, and it was directed that every person so notified should within six months thereafter provide himself with suitable arms and accoutrements. The organization to be effected was described in this Act in detail, and it was provided that "within one year after the passing of this Act, the Militia shall be organized into divisions, brigades, regiments, battalions and companies, as the Legislature of each State shall direct." Colors were to be provided by the field-officers, and drums, fifes and bugle-horns were to be supplied from the purses of the company officers. In each State, an Adjutant-General was to be appointed, and his duties toward the General Government were indicated. Independent corps of artillery, cavalry and infantry, then in existence, were recognized and made subject to the Act, being graciously permitted, however, "to retain their accustomed privileges."

Six months, in those days of sail and wagon transportation, was an exceedingly limited time in which to gather together the munitions of war. The Revolutionary conflict had ended eight years before, and the arms and accoutrements were scattered. Attics, closets and cellars had to be ransacked for "the good musket or fire-lock, sufficient bayonet and belt, spare flints and knapsack." Moreover, it was a proviso of the Act referred to that, from and after five years, all muskets in the hands of militiamen should be of a uniform caliber. To meet this requirement, which it was found quite impossible to comply with, Congress, in 1798, authorized the purchase of thirty thousand stand of arms at a cost of \$400,000, "for the purpose of being sold to the governments of the respective States or the Militia thereof." The Congress still clung to the ancient idea that the soldier must arm himself at his own expense. A slight relaxation of this principle, however, is observed in a later clause of the same Act, by which it was further declared that should any of the arms remain unsold, the President was authorized to loan them to the Militia when called into the service of the United States, "proper receipts and security being given for the return of the same." By the Act of March 2, 1803, it was made the duty of the Adjutant-General in each State to make annual return of the Militia of the State to which he belonged, with their arms, accoutrements and ammunition; and the Secretary of War was required to give such directions to the Adjutants-General of the Militia "as shall in his opinion be necessary to produce an uniformity in said returns," and to lay an abstract of the same before Congress each year. This law also added a Quartermaster-General to the organization in each State. The burden of furnishing arms and accoutrements, at their personal expense, had always been complained of by the militiamen as a very unequal tax; the opposition finally attained such proportions as to lead to the adoption of a measure for their partial relief. On the 23d of April, 1808, a bill was approved making an annual appropriation of \$200,000 for the purpose of providing arms and military equipments for the whole body of the Militia, to be transmitted to the several States and Territories in proportion to the number of effective Militia therein. Slight changes in organization, suggested by the recent war experience, were made by the acts of 18th April, 1814, and 20th April, 1816, and by the Act of May 12, 1820, it was directed that the system of discipline and field exer-

cises, which is and shall be ordered to be observed by the Regular Army of the United States in the different corps of Infantry, Artillery and Riflemen, shall also be observed by the Militia in the exercises and discipline of the said corps, respectively, throughout the United States.

Various statutes were also passed (Feb. 28, 1795,) indicating the circumstances under which it shall be lawful for the President to call forth the Militia, prescribing penalties for disregarding the call and the method of levying fines (April 20, 1818); providing for payment of necessary expenses in assembling the Militia pursuant to a requisition of the President (March 19th, 1836, Seminole War period); allowing to militia in actual service the same pay, rations, clothing, forage and camp equipage, as is allowed to the Army, and (June 18, 1846, Mexican War period) prescribing the money allowance for clothing and transportation of militia troops in service, and authorizing the President to appoint certain additional staff-officers to continue in service "only so long as they shall be required in connection with the Militia and Volunteers." In 1855, the annual distribution of arms was changed to accord with the number of representatives in Congress from each State, the distribution to the Territories being left to the discretion of the President: and the first year's experience in the Civil War led Congress to provide (Act, July 17, 1862,) that the Militia when called into service shall be organized "in the mode prescribed by law for volunteers." Finally, on the 2d of March, 1867, the original Act of 1792 was amended by striking out the word "white," thus extending the obligation to military service to all able-bodied men of military age without regard to race, color or condition. The defenceless state of our coast frontier and the increasing interest in military training in the various States were again recognized in the councils of the nation by Act of May 19, 1882, whereby an appropriation of \$5000 for heavy ordnance was made to each coast or gulf State having a permanent camp-ground and an annual encampment of not less than six days, and by Act of February 11, 1887, the appropriation of \$200,000 made in 1808, was increased to \$400,000, and extended to include quartermaster's stores and camp equipage.

The system inaugurated in 1792 continued in actual operation during the first half century of our national existence, but with the growth of population and wealth, and the inclinations of the

people to the pursuits of peace, it grew more irksome year by year. The list of exemptions daily increased, and means were sought on every hand to evade its requirements. The practice of hiring substitutes, which obtained in Great Britain, and which had prevailed in the War of 1812, adhered to the Militia after the termination of that conflict; and the legislatures of the States found various pretexts whereby to reduce the military age.¹ The inequality of the burdens imposed by the system, and the general inefficiency of the Militia, became a subject of such general concern as to induce President Adams in a message to Congress in 1828, to invite the attention of that body to its serious consideration. The Committee on Military Affairs in the House, to whom that part of the message had been referred, brought in a carefully prepared report from which it will not be uninteresting to make a brief extract. After declaring their conviction that a well organized and efficient national militia is not only the most appropriate defence of a free, high-minded and enlightened people, but that it would, therefore, form the greatest safeguard of these United States, the committee go on to say that, "in the discharge of the duty assigned them, they have with unwearied diligence sought to avail themselves of all the light shed upon the important subject by the expressed opinions of experienced and distinguished military men, and reports of intelligent committees of both Houses of Congress. In the progress of their investigations they find that the division of constitutional powers which was made by the framers of our great national compact, under the influence of a provident jealousy of the people's rights, was not without its embarrassing effects. Studiously avoiding any innovation upon the rights so clearly reserved to the States by the Constitution, the committee have anxiously labored to give effect to the powers which are so clearly granted to Congress by that instrument. The first important branch of the general subject which engaged the attention and reflection of the committee is the suggested necessity of an officer to serve as a point of concentration of all reports, exhibits, returns, and other useful information relating to the whole Militia of the United States. Satisfied of the indispensable necessity of such an office, the committee respectfully recommends its creation. * * * An increase of the annual appropriation for arming the Militia is recommended. * * * To carry into successful effect the grant of constitutional power which authorizes Congress to provide for

disciplining the Militia, the committee propose to hold out inducements to the several States and Territories, to authorize and require by legislative enactments of the legislatures of the States and Territories respectively, an annual convocation of commissioned and non-commissioned officers and musicians, to be encamped in their respective States and Territories a specified length of time, for the purpose of being trained by proper instructors. * * * That the system proposed is but an experiment, to test which will cost the United States a million and a half or two millions of dollars, is an argument which ought not to be permitted to countervail its proposed adoption. The present period, with its attendant circumstances, seems peculiarly propitious to the proposed organization. Already have propositions novel and experimental in their character, to dispose of an anticipated burdensome surplus in the Treasury of the United States, been presented to Congress for consideration. If such anticipations are well founded, the claim of the Militia of the United States to a liberal share of such surplus is irresistible." The committee conclude by submitting a bill providing for a division of the Militia into two classes, the junior class to include the ages 21 to 28, and to be first for duty: the senior class to include all others to 40 years. Annual encampments, as suggested in the report, of not less than six nor more than ten days were also provided for. Recommendations of a similar nature had been made several years before by a Board of Militia and Army officers which was convened at Washington in 1826. This board, of which General Winfield Scott was president, and Lieut.-Col. Zachary Taylor a member, proposed the appointment of an "Adjutant General for the Militia of the United States," and submitted a plan for 104 divisional encampments of ten days' duration for the instruction of officers and non-commissioned officers in the various States. The board estimated 16,758 officers, after deducting surgeons (retaining one for each camp), and allowing one-sixth for absentees. They recommended a per diem of \$1.50 to each man present, a mileage allowance of \$2.50, and one tent to four men. Allowing \$11,500 for instruction and music, and supposing the tents to continue serviceable for eight years, they estimated the total annual cost of the camps at \$318,123. The board also suggested "that it be made the duty of the Secretary of War, on application made by the Executives of the several States, to provide competent instructors, and as far as practicable by selec-

tion from officers of the Army or graduates of the United States Military Academy." Recommendations were also made to furnish the Militia with elementary military text-books, pursuant to which, by Act of March 2, 1829, sixty thousand copies of Infantry Tactics and five thousand copies of Artillery Tactics were published and distributed to the Militia. In January, 1831, a convention of Massachusetts Militia officers met at Boston, and submitted a memorial to Congress praying that an effective and uniform system be adopted for the regulation and government of the Militia of the United States. The patience of these memorialists seems to have been quite exhausted by the inaction of Congress and the restrictions imposed by the Constitution. They declare that "of all the checks upon the different branches of authority in our government, none appear at first sight to be more incongruous than those which relate to the Militia."⁸ The State Legislatures were also aroused, and we find the Maine Legislature in 1833 resolving "that our Senators in Congress be and they are hereby instructed, and our Representatives requested to use their exertions, both by their votes and their influence, to procure the passage of a law providing for a more perfect and uniform organization of the Militia of the several States of the Union."⁹ Similar resolutions came up about the same time from the legislatures of New York and New Hampshire, followed by Indiana and other States a few years later.⁹ It was becoming a crystallized conviction with the people that an effective reserve force could never be created by conscription. The whole system was becoming impracticable; in truth, its collapse had been foreseen and predicted from a very early day. A gentleman of Pennsylvania, replying to a circular letter from the Secretary of War in 1826, declared that "at no very distant time we shall probably have a body of State troops, but in the meanwhile upon the Militia no reliance can be placed. My only hope is in the Volunteer."⁸

As the Militia fell into disrepute it was gradually abandoned by the more spirited young men of the community who organized themselves into select corps, chose officers to their liking, and adopted rules and regulations for the government of their members.¹⁰ Thus Virginia had in 1827, over twenty-three thousand uniformed volunteers against seventy-five thousand regular or conscripted militia. In course of time the Militia system came to be almost wholly disregarded, and finally by

common consent it disappeared altogether. The arms, rapidly growing obsolete, were left to rust in arsenals, and those belonging to volunteer companies and individuals were stowed away in garrets and cellars; the "cornstalk" Militia soon became only a memory."

Passing over the war period of 1861-5, we perceive issuing from the smoke and flame of that terrific conflict "a wise and understanding people," scourged to the limit of endurance for their negligences in the past, and resolved that the calamity of war and civil discord should never find them so unprepared again. This influence and the necessity for a reserve police force resulted in the organization of a Volunteer National Guard in all the States of the Union. These troops now aggregate a force, uniformed, armed and equipped, of over one hundred thousand men. Referring to these forces the Adjutant-General of New York, in his last annual report,¹² says, "The Militia of the Constitution is a theory of the last century, * * * without any aid from the National Government the volunteer military organization which have grown in many States, variously known as State Troops and National Guards, by the rapid progress they have made in matters of organization, discipline and the use of arms, as well as by the proofs they have given, that under proper auspices they may be depended on for service, have solved the problem which puzzled the National legislature and given us a force sufficiently national in its character, but at the same time not obnoxious to the prejudices which obtain against a centralized force or standing army."

THE NATIONAL RESERVE IN FUTURE.

Having briefly outlined the policy and efforts of the past, let us now endeavor to construct a system for the future. Referring to the powers reposed in Congress by the Constitution, we observe that whatever is accomplished in this regard must be done either under the authority "to raise and support armies," or "to provide for organizing, arming and disciplining the Militia," or both. A force enlisted, organized and trained under the first grant would possess many obvious advantages. Its officers would be appointed by the President and thus not subject to the caprices of the elective system now prevalent in the National Guard. Their first duty and allegiance would be to the General Government and not merely available through the indirect

agency of the State. The training, discipline and entire control of the force would be subject to one central authority, and the moral influence of a great reserve would be at all times instantly available to the Executive. It would, in fact, be a part of the Regular Army, and could eventually be brought to as high a standard of excellence. Being under a central authority the great losses now sustained by the State organizations due to changes of residence, would be obviated.¹³ Any change of domicile within the United States would only affect a transfer of the soldier to another company and would not, therefore, operate as a discharge. The cost of maintenance under a central administration would doubtless be more economical and certainly would not exceed the aggregate now expended by the various States for military purposes. It would be a legitimate means of relieving the Treasury by allowing the surplus to flow back to the people. The strength of the Reserve could be increased by this scheme to any desired extent, by retiring the active reserve after three or four years' service to a sedentary reserve, and finally to a territorial reserve or *landsturm* as in France and Germany. Finally, all apprehension of executive abuse of the great power so created would be banished by sufficient statutory provisos, limiting the assembling of the force in peace to small detachments and at widely separated places and periods of time. But, however desirable the creation of a centralized force may be in the interests of strong government and diplomacy, and however plausible the plan of the organization and training may appear (and it certainly is not without support, if the bill¹⁴ recently introduced into the Senate on this subject means anything), it seems to be wholly and utterly impracticable. It would be regarded as an attempt to supplant the National Guard of the States, and, if successful, it would undoubtedly have that effect. For this, if for no other reason, it would excite the jealous alarm and opposition of every National Guardsman now on the rolls, and as a result, would not receive the support of fifty votes in the national House of Representatives. Again, it would be impracticable because of the direct appropriations required to support it. It is estimated that over six million dollars¹⁵ are annually expended in the United States for the maintenance of the present organization of one hundred thousand men, and a less force would scarcely be recognized as a sufficient Reserve. Many of the States now own fine armories, yet the item for rent alone is still nearly a million of

dollars. Nearly all the States now provide for annual encampments for the modest period of from five to eight days. The pay for the troops in these camps—and all are not paid—amounts to about one million more. The annual appropriation of the single State of Massachusetts for military purposes is over one hundred and fifty thousand dollars,¹⁶ and yet admitting the excellent results already attained in that public-spirited Commonwealth no one pretends to say that all has been done that need be done to secure the desired standard of proficiency. It may be answered that the sum named is but a paltry consideration, and even though doubled would be a small premium for the insurance of peace secured by the existence of so efficient a force as it would provide. This is undoubtedly true, and no nation in the world has more reason than we to lament the ruinous policy of being "more saving of Peace taxes than of War debt."¹⁷ But as Adam Smith declares, "Nations are never impoverished by private but public prodigality," and our people have never been willing, even when burdened with a great surplus, to make an investment which does not promise an immediate, palpable, return. Except when confronted with the imminent prospect of war, the national provision for the common defense has been characterized by a withering parsimony. And with the frequent return of our Representatives to seek the endorsement of their constituents, we cannot expect to see an early or notable change in this regard. No public measure can meet with success in advance of the popular sentiment affecting it. Indeed, it is believed that if the maintenance of the National Guard of the States were dependent wholly upon direct legislative appropriation, the system could scarcely be held together. Various devices are resorted to, such as a commutation poll tax, exemption from jury duty and road tax, and imposing upon counties the charges for erection or rent of armories, fuel, lights, etc., in order to distribute the cost among the people in small sums, which in the aggregate would never reach a second reading if embodied in a bill in the Legislature.¹⁸ Such is the spirit of our people, and although it may not be contemplated without regret by the professional soldier, the formation of a great Federal Reserve under the authority to raise and support armies and in which the State authorities shall exercise no control, is an event which the present generation is not likely to see.

Turning now to the second grant we observe that Congress

has power "to provide for organizing, arming and disciplining the Militia,"¹⁹ and for governing such part of them as may be employed in the service of the United States, reserving to the States, respectively, the appointment of officers and the authority of training the Militia according to the discipline prescribed by Congress." We have followed the efforts of the fathers to exercise this power, and traced the rise, decline and fall of their ambitious system. In its stead we find to-day in the various States and Territories an aggregate force of 106,814 men,²⁰ brought together by voluntary enlistments under statutory provisions of the respective States, and armed, uniformed and instructed without material assistance from the General Government. In many of the States the oath²¹ of enlistment binds them to support the Constitution of the United States, and "to serve them honestly and faithfully against all their enemies whomsoever." These troops are well organized and equipped, and many of them have attained a degree of proficiency and smartness in the drill-book beyond which it is not desirable to go. They are ready to enter upon a higher and more advanced course of instruction, and now stand knocking at the door of Uncle Sam asking for professional support and co-operation. For the most part they are composed of the representative young men of the nation, and enjoy the confidence and good-will of the people. Their numbers are increasing year by year, and could be augmented to any desired limit with slight encouragement.²² Irresistibly we are drawn to the conclusion that here is the true National Reserve—the only practicable organization which can be availed of under our form of government with our kind of people. Let us proceed then to an investigation of this force and of the methods whereby it may be made available. The latest official return²³ shows the following distribution of the National Guard among the States:

ABSTRACT OF THE RETURN OF THE REGULARLY ENLISTED,
ORGANIZED AND UNIFORMED ACTIVE MILITIA OF THE UNITED
STATES, JULY 2, 1888.

Alabama	2244	Florida	1171
Arkansas, no return.		Georgia.....	4566
California	4417	Illinois.....	4150
Colorado	1153	Indiana.....	2184
Connecticut	2573	Iowa.....	2693
Delaware.....	709	Kansas	1966

Kentucky	1336	Rhode Island	1156
Louisiana	2017	South Carolina	4844
Maine	968	Tennessee	1557
Maryland	2016	Texas	2556
Massachusetts	5046	Vermont	792
Michigan	3012	Virginia	2875
Minnesota	1796	West Virginia	869
Mississippi	1389	Wisconsin	2092
Missouri	2151	Dakota	992
Nebraska	1222	Montana	623
Nevada	362	New Mexico	1735
New Hampshire	1230	Washington	890
New Jersey	3947	Wyoming	48
New York	13,230	District of Columbia	1189
North Carolina	1314	Arizona	} Have no organized militia.
Ohio	5626	Idaho	
Oregon	1557	Utah	
Pennsylvania	8545		
Aggregate States			101,337
Aggregate Territories and District of Columbia			5,477
Grand Aggregate			106,814

This force is organized into infantry, artillery and cavalry, as follows, exclusive of commissioned officers—8442 :

	<i>Infantry.</i>	<i>Artillery.</i>	<i>Cavalry.</i>
States,	84,456	5074	3890
Ter. and D. C.,	3262	100	1590
Totals,	87,718	5174	5480

The cavalry is found principally in the Southern States and Territories, South Carolina having 1480 and New Mexico 1342. The five States of Virginia, South Carolina, Georgia, Alabama and Texas contain an aggregate of 2639 troopers, and these added to the force of New Mexico constitute over seventy per cent. of the entire cavalry force. Massachusetts and the District of Columbia have also organized small signal corps, and in the former a detachment of twenty-six men constitute an ambulance corps. The statutes of the several States under which these forces are maintained generally provide that their organization shall conform as nearly as practicable to that which is or may be prescribed for the United States Army, and we find a tendency throughout the Union to adopt the uniform, regulations and customs of the Regular Service. Could any probability be more attractive or promising than the ultimate molding of these zealous, public-spirited and patriotic State forces into a splendid National Reserve?

has power "to provide for organizing, arming and disciplining the Militia,"¹⁹ and for governing such part of them as may be employed in the service of the United States, reserving to the States; respectively, the appointment of officers and the authority of training the Militia according to the discipline prescribed by Congress." We have followed the efforts of the fathers to exercise this power, and traced the rise, decline and fall of their ambitious system. In its stead we find to-day in the various States and Territories an aggregate force of 106,814 men,²⁰ brought together by voluntary enlistments under statutory provisions of the respective States, and armed, uniformed and instructed without material assistance from the General Government. In many of the States the oath²¹ of enlistment binds them to support the Constitution of the United States, and "to serve them honestly and faithfully against all their enemies whomsoever." These troops are well organized and equipped, and many of them have attained a degree of proficiency and smartness in the drill-book beyond which it is not desirable to go. They are ready to enter upon a higher and more advanced course of instruction, and now stand knocking at the door of Uncle Sam asking for professional support and co-operation. For the most part they are composed of the representative young men of the nation, and enjoy the confidence and good-will of the people. Their numbers are increasing year by year, and could be augmented to any desired limit with slight encouragement.²² Irresistibly we are drawn to the conclusion that here is the true National Reserve—the only practicable organization which can be availed of under our form of government with our kind of people. Let us proceed then to an investigation of this force and of the methods whereby it may be made available. The latest official return²³ shows the following distribution of the National Guard among the States:

ABSTRACT OF THE RETURN OF THE REGULARLY ENLISTED,
ORGANIZED AND UNIFORMED ACTIVE MILITIA OF THE UNITED
STATES, JULY 2, 1888.

Alabama	2244	Florida	1171
Arkansas, no return. .		Georgia.....	4566
California	4417	Illinois.....	4150
Colorado	1153	Indiana.....	2184
Connecticut	2573	Iowa.....	2693
Delaware.....	709	Kansas	1966

Kentucky	1336	Rhode Island.	1156
Louisiana	2017	South Carolina.	4844
Maine	968	Tennessee.	1557
Maryland	2016	Texas	2556
Massachusetts.	5046	Vermont	792
Michigan	3012	Virginia	2875
Minnesota.	1796	West Virginia	869
Mississippi	1389	Wisconsin.	2092
Missouri	2151	Dakota	992
Nebraska	1222	Montana.	623
Nevada	362	New Mexico.	1735
New Hampshire.	1236	Washington	890
New Jersey.	3947	Wyoming	48
New York	13,230	District of Columbia	1189
North Carolina.	1314	Arizona	Have no organized militia.
Ohio	5626	Idaho	
Oregon	1557	Utah	
Pennsylvania.	8545		
Aggregate States.			101,337
Aggregate Territories and District of Columbia.			5,477
Grand Aggregate.			106,814

This force is organized into infantry, artillery and cavalry, as follows, exclusive of commissioned officers—8442 :

	<i>Infantry.</i>	<i>Artillery.</i>	<i>Cavalry.</i>
States,	84,456	5074	3890
Ter. and D. C.,	3262	100	1590
Totals,	87,718	5174	5480

The cavalry is found principally in the Southern States and Territories, South Carolina having 1480 and New Mexico 1342. The five States of Virginia, South Carolina, Georgia, Alabama and Texas contain an aggregate of 2639 troopers, and these added to the force of New Mexico constitute over seventy per cent. of the entire cavalry force. Massachusetts and the District of Columbia have also organized small signal corps, and in the former a detachment of twenty-six men constitute an ambulance corps. The statutes of the several States under which these forces are maintained generally provide that their organization shall conform as nearly as practicable to that which is or may be prescribed for the United States Army, and we find a tendency throughout the Union to adopt the uniform, regulations and customs of the Regular Service. Could any probability be more attractive or promising than the ultimate molding of these zealous, public-spirited and patriotic State forces into a splendid National Reserve?

ORGANIZATION.

The President is Constitutional Commander-in-Chief of the Militia when called into the actual service of the United States, but can be clothed with power to call them into such service only "to execute the laws of the Union, suppress insurrections and repel invasions;" and while Congress has the authority to provide for organizing, arming and disciplining the Militia, it can regulate the government of only such part of them as may be so called by the President into actual service. If, therefore, the Militia or any part of it (as the active militia or National Guard) is to be brought under the authority and control of the national executive power in time of public tranquility, and for any other purpose than to execute the laws of the Union, or to suppress or anticipate insurrections and repel invasions, it can be accomplished only by and through a mutual agreement between the Government on the one hand and the States on the other, whereby the rights reserved to the States shall not be put in jeopardy, and yet the authority of the General Government for the time being sufficiently established. And this is believed to be entirely practicable. The availability of such a force in the event of War could be as readily secured as it is now in the several States, by the statutes of which it is provided that the organized troops in case of public disturbance shall be the first for service.²³

Following the suggestion of the Scott Board of 1826, the first step in the organization of the Reserve would seem to be the detail, or better, the appointment, of an Adjutant-General of Reserve, whose office should be in the War Department, and whose duties should comprise those relating to the Militia now performed by the Adjutant-General of the Army, together with all matters connected with the organization, instruction and discipline of the Reserve, as might be provided by Congress. He should have the rank, pay, and allowances of a Brigadier-General, and be selected from the permanent establishment. In like manner there should be detailed or appointed a Paymaster-General, an Inspector-General and a Quartermaster-General, the last-named officer acting also as Commissary-General of Reserve. These officers should have a sufficient corps of assistants to be designated as Acting Assistant Adjutants-General, etc., of Reserve, one-half of whom would be detailed from the Army, and one-half from the Reserve, but no officer should be detailed for this or any other staff duty who had not served as a commissioned offi-

cer for at least three years. The officers performing this duty should have the rank of Captain of Cavalry and details should be limited to four or five years. All selections for this duty should be made by the chiefs of departments upon the recommendation of their subordinates. Upon the request of the Governor of any State having not less than two hundred officers and men enrolled in the National Reserve, for every Representative from the State in Congress, and upon a like request from the Governor of any Territory having not less than one thousand men enrolled, there should be detailed an officer of the Army to act as Assistant Adjutant- and Inspector-General and Military Instructor, whose duty it should be under the direction of the Governor of the State or Territory to superintend and direct the instruction and drill of the officers and men of the Reserve in the State to which he may be assigned. This officer should visit the armories during the year, lecture to the officers and non-commissioned officers, observe the drill and assist the commanders by proper criticism and suggestion in the discharge of their duties. "The efficiency of an army," wrote Gen. Gaines a half-century ago, "mainly depends upon the character and qualifications of the captains of companies and commandants of regiments," to which Gen. Sherman has added, "The company is the basis of all good armies."²⁴ In modern War the intelligence and discipline of subordinate commanders is become the paramount consideration. An able military critic has said, "Formerly the deficiencies of the individual were to a large extent lost in the impulse of the mass. But now the initiative, once always exercised by the chief, has largely to be left to the Corporal and Captain. The battalion has become of far more consequence than the brigade."²⁵ Those who have had occasion to closely observe the National Guard, have remarked a tendency to slight the elementary instruction. The men have the spirit but not always the appearance of soldiers; they need more setting up, more squad drill, more saluting and standing at attention. A competent young officer as instructor would soon correct these defects, but great care should be exercised in his selection. If possible in our form of government, personal and political and social influence in this instance at least should be held in abeyance. The detail of an efficient officer in this capacity would doubtless be welcomed in every State.²⁶ It should also be made his duty to accumulate information embracing all subjects of military deficiency and the means

of supply within his State tending to a full development of the military resources, local and disposable, of every section of the country. The information thus collected should be classified and reported to the Adjutant-General of Reserve, thus enabling the Government on the sudden approach of War to comprehend at once the actual force and means of supply directly applicable to the defense of any and every assailable point on the National frontier.

Congress should provide that all regularly-organized, uniformed and equipped active militia or National Guard now in existence, or which may hereafter be properly organized under the statutory authority of the several States and Territories, should be eligible to enrollment in a force to be known as the National Reserve of the United States. Any organization desiring to be enrolled should transmit an application through the Adjutant-General of Reserve, who, upon satisfactory evidence of the qualifications of the organization, and with the approval of the Adjutant-General of the State should cause it be enrolled.²⁷ But no independent company, battery or troop not belonging to the organized State Militia should be eligible.²⁸

The staff, troops, batteries, companies and regiments of the Reserve should have the same organization and practically the same strength as that which is or may be prescribed for the Army. Infantry regiments should, however, consist of three battalions of four companies each, and to each battalion of four companies or less, there should be one Major. Each regiment should have one Surgeon, one Assistant Surgeon, one Chaplain, one Commissary Sergeant, and one Hospital Steward; and to each battery there should be one Assistant Surgeon, and to each troop and battery one Veterinary Surgeon. This is the organization now existing in most of the States. Brigades and divisions should be organized under the direction of the Commanding-General of the Army. Major-Generals should be selected and appointed by the President from among the Brigadier-Generals of the Geographical Division (to be hereafter indicated,) in which they may reside, and Brigadier-Generals should in like manner be appointed from among the Colonels of the particular geographical districts. Field officers should be elected by the written ballots of the commissioned officers of companies of their respective regiments and company officers by the written ballots of the members of their respective companies. All officers below the

rank of Brigadier-General should be commissioned by the Governors of the respective States in which the officers are located, but commissions so issued should expire in five years.

Non-commissioned officers should be appointed by their immediate commanders, and regimental staff officers by the commanders of regiments.

The elective system may not be regarded with favor, but it prevails in nearly all the States, and, indeed, is imposed by specific clauses in various State Constitutions.²⁹ It has also been adopted by Congress for the Militia of the Territories.³⁰ It is so deeply imbedded in the habits and affections of the people that no other method would now be practicable. At the worst it will certainly not be found an unmixed evil, for, as a sagacious observer has said, "Bodies of men are quick in discerning traits of character, courage, firmness, dash and endurance, and it is just here that competitive examinations fail."³¹ To eliminate as far as possible the evil features of the elective system whereby incompetent and unworthy men are sometimes elevated to office, all officers should be required to pass an examination before a board duly constituted in each State for this purpose. The Acting Assistant Adjutant-General should be *ex-officio* President of this Board, and it should convene at least twice in each year.³² The National Reserve members of this Board should be allowed a sufficient per diem and mileage in the discharge of this duty.

All officers of the National Reserve should be retired (honorably discharged) for age as follows:

General officers at 60. Field officers at 55. Captains at 45. Subalterns at 40. Every commissioned officer in whose hands public money or property issued by the General Government for the maintenance of the National Reserve shall be placed, should be required to give sufficient bonds, conditioned safely to account for the same.³³

Enlistments should be for three years, but no enlistment should be made within a period of six months next preceding the annual encampment in which the soldier is to participate.³⁴ No person should be enlisted who is under sixteen or over twenty-seven years of age. A period of six months would thus be afforded for recruitment, and the retirements for age and by expiration of service would not exceed the losses now sustained, while we should at the same time secure vigor, activity and an encouraging flow of promotion.³⁵ Every member of the National

Reserve should take and subscribe to an oath to bear true faith and allegiance to the United States and to the State in which the enlistment is made, and to serve them honestly and faithfully against all their enemies whomsoever. It should also be provided and made a part of the enlistment contract, that the National Reserve should be the first for duty in all cases requiring the services of troops in addition to those of the permanent establishment.²⁵ To allay captious opposition or possible serious apprehension, it should be further provided that no Reserve troops shall be paraded in time of Peace under the authority of the President on Election or Inauguration Day except as now provided by law.

For all police purposes in aid of the civil authority the Reserve troops, except when called into the active service of the United States, should remain under the authority and subject to the orders of the Governors of the respective States.

UNIFORM.

The fatigue uniform of the United States Army, including shoes, should be adopted for the Reserve. The State troops now generally have this uniform, substituting the State button. In New York the coat consists of a double breasted dark blue sack, but nearly all the regiments supplement it at their own expense with blouses.²⁶ No dress uniform need be prescribed. In the Western States, where the National Guard is still young, it would gradually conform to that of the army.²⁷

ARMS.

Arms and equipments should also conform to those of the Regular Service. Quite, if not all of the State troops are provided with the cartridge box and knapsack. These would doubtless be discarded, as both cumbersome and physically injurious in a protracted campaign, but for the brief periods of service for which they would be required in training, and because of some obvious advantages they present for police duty in State service, they may be undisturbed for the present. The New York troops still carry the 50 calibre Remington, and some of the cavalry in other States are armed with Sharp's carbines, but though the allotment from the Ordnance Department is very meager, the remaining States are now generally supplied with the Springfield weapon. Field artillery being at a period of transition it will not be wise to

increase that arm beyond the resources, obsolete as they are, now at hand. There should, however, be to every brigade organization one battery of Gatling guns, "those hybrid monsters whose definite assignment to some arm is still an undetermined question in our service." In each coast and Gulf State there should be two companies of heavy artillery. The instruction of these companies should be carried forward at the various forts and landing-places along the coast in a manner similar to that pursued by the New York troops at Fort Wadsworth, and where no permanent works are available, siege-gun and mortar batteries should be constructed similar to those at the State camp-grounds in Louisiana, Massachusetts and Connecticut. It has been suggested that Fort Independence in Boston Harbor could be turned over to the Militia temporarily for this instruction, but where no available works exist, provision should be made for their construction sufficiently near to the armories to be accessible at all seasons of the year.³⁸ Armories of the heavy artillery companies should be furnished with dummies, and those of light batteries and cavalry troops with wooden horses. The necessary implements and projectiles actually used in service should be handled in the instruction at heavy gun dummies. The men could thus be made familiar with the system during the winter months.

ELEMENTARY INSTRUCTION.

By the statutes or regulations of those States having the best developed systems of administration, we find it provided that there shall be stated drills each month, and a scale of fines for delinquencies is established by the Company Council of Administration subject to approval by higher authority. Commanding officers are authorized to cause the arrest of any delinquent and bring him to trial before a court of inquiry, and if he refuse to pay the fine adjudged, it is made the duty of any justice of the township before whom the matter is brought to render judgment and issue execution without stay, and the fine so adjudged is made collectable without exemption.³⁹ This article of discipline should be imposed by law upon the Reserve, but the method of levying fines and the details of all other matters of internal administration, such as the creation and disbursement of a regimental or company fund, the support of bands, rent, or erection of armories, and the charges of furnishing, lighting, heating and caring for the same, and for the safe keeping of arms, clothing

and accoutrements, should be required to be provided for by the legislatures of the respective States. These matters are now generally and in many cases handsomely provided for in all the States; but all armories should be subject to inspection by the Inspector-General or other detailed officer of the Reserve, and no armory accepted which was not of ample proportions. Every officer and man should be required to drill at least once each month, and during a period of three months each year there should be a non-commissioned officers' school, one hour each week.

CLOTHING AND BLANKETS.

Uniforms and blankets should be furnished by the States, and no National Guardsman should be accepted in the Reserve who is not supplied with both. The States prefer to furnish them, and no abuse could arise that would not speedily be detected. Since the amendment of the Act providing arms, to include Quartermaster's stores, some of the States have drawn cloth for uniforms, but it is maintained by some that the States actually incur a loss of at least ten per cent. of their apportionment by reason of the reduced figure obtainable on the same goods at the mills by private contract. If furnished by the State, therefore, they might give better satisfaction, and would be as scrupulously cared for as if they were the property of the United States. The principal use to which they would be applied being in the service of the State, it is but just that the State should provide them.

PAY.

Every member of the National Reserve should receive compensation, not only during the period of his service in camps of instruction but throughout the year in armories.* Length of service should also be rewarded by increase of pay. A monthly statement, sworn to by the First Sergeant of the company, and certified to by the Captain, should be forwarded to the Adjutant-General of Reserve, showing the number of men present at the required monthly drill during a full period of not less than two hours; also the number absent, reporting officers by name, and the number in attendance at non-commissioned officers' school. For each drill or recitation attended every member should receive the sum of twenty-five cents. The officer acting as instructor of the school should be paid fifty cents. The want of

some slight compensation is greatly felt and complained of, and there can be no doubt that this arrangement, a strict administration of fines, and the resulting *esprit de corps* would secure the attendance of every man in the organization. For a force of 100,000 officers and men at drill and 16,000 non-commissioned officers at schools, we should require an appropriation of about \$350,000. If such a proposition were submitted to the National Guard to-day it would probably be carried through the lower house of Congress with little opposition. For service in camp nearly all the States now provide a compensation, more or less liberal, depending perhaps on the price of labor in the particular community.⁴¹ It is believed that one dollar per day for privates and musicians, with subsistence, quarters and transportation, would be sufficient for service in camps of the National Reserve. Corporals and Sergeants should receive \$1.25, Non-Commissioned Staff and First Sergeants \$1.50, Subalterns \$2.00, Captains \$2.25, Field Officers \$2.50, and Regimental Commanders \$3.00.⁴² In the present force of National Guardsmen we find 5475 company officers. We may take one-third of these to be captains, giving 1825 Captains, 3650 Subalterns, and 1825 First Sergeants. The aggregate of non-commissioned officers is 17,162. Deducting 1825 First Sergeants, we have 15,337 Sergeants and Corporals. Of these about 800 are non-commissioned staff officers. There remain, then, 14,537 Sergeants and Corporals. Estimating one regimental organization to ten companies (a low estimate), and allowing one Surgeon (Major), one Assistant Surgeon (Captain), one Chaplain (Captain), and two staff officers paid as Captains, the total pay per day would be in round numbers \$110,000. For length of service officers and men should receive an increase of five per cent. for each period of three years' service.

SUBSISTENCE AND FORAGE.

Commutation of subsistence is allowed in many of the States, ranging from twenty to seventy-five cents per day. The issue of rations in kind would deprive the junior officers of the Supply Department of what they now regard their most important function, and would fail to give the desired satisfaction. The educational benefit must be regarded. An efficient staff can only be created by a practical and extended experience.

A poor quality of beef in a mess of volunteer soldiers would be very unpleasantly brought to the notice of a negligent com-

missary. If all responsibility could be referred to a higher and less accessible authority, the performance of his duties might soon become perfunctory. It is believed that a commutation of twenty-five cents per day should be allowed to each man actually present in camp, and that the funds should be transferred direct to battery, troop and company commanders. In like manner the funds of the quartermaster's department for horse hire, forage, etc., should be transferred to the regimental or camp quartermaster, and the supplies procured in open market. In camps of larger organizations, as brigades, the supplies should be procured and issued by a post or chief quartermaster or commissary, and the balance, if any, remaining at the end of the encampment, transferred in funds to the company commander.

ENCAMPMENTS.

The territory of the United States should be divided into twelve Military Districts; coast and Gulf States and those adjacent to the national frontier to be grouped together. Beginning with Maine these districts, together with the present Congressional representation and the organized forces in each would be as follows :

MILITARY DISTRICTS.

<i>No.</i>	<i>States and Territories.</i>	<i>Congressmen.</i>	<i>Active Militia now in service.</i>
1.	New England States,	26	11,771
2.	New York,	34	13,230
3.	Penn. and Delaware,	29	8,254
4.	New Jersey, Md., D.C., and Va.,	23	10,027
5.	N. C., S. C., Ga., and Fla.,	28	11,895
6.	Ala., Miss., La., and Texas,	32	8,206
7.	W. Va., Ky., and Tenn.,	25	3,762
8.	Ohio and Michigan,	32	8,638
9.	Illinois and Indiana,	33	6,334
10.	Iowa, Wis., Minn., Dak., Montana, Nebraska, and Wyo.,	31	9,418
11.	Ark., Missouri, Kansas, Colo., N. Mexico, and Utah,	29	7,005
12.	Ariz., California, Nevada, Oregon, Washington, and Idaho,	11	7,226

Each District should have an Acting Assistant Adjutant-General, an Acting Assistant Inspector-General, an Acting Assistant Paymaster-General and an Acting Assistant Quartermaster-General of Reserve. These officers should have the rank of Major; the Adjutant and Inspector-General should be continu-

ously on duty ; the others for such time in each year as might be required. The Inspector should be detailed from the Army and should familiarize himself with the various organizations of his District by personal visits during the year to armories and State encampments. All reports of officers detailed to inspect State encampments in his District, should be forwarded through him to the Inspector-General of Reserve.

Two adjacent Districts should constitute a geographical Division, and encampments should be State, District or Division, and National.

STATE ENCAMPMENTS.

State camps should continue for ten days in each year and be under the entire control of the State authorities, subject to inspection by the District Inspector-General or his assistants.⁴³ To every State encampment there should be detailed by the Adjutant-General of Reserve upon the application of the Adjutant-General or Executive of the State a competent instructor, either from the Army or from among the most efficient officers of the Reserve. Should any organization be found by the Inspector-General to be below a prescribed standard of efficiency, or be not properly provided with armory facilities and suitable uniform by the State, the Adjutant-General of Reserve should have authority, upon the recommendation of the Inspector-General, to muster it out of the Reserve.

DISTRICT ENCAMPMENTS.

There should be an annual encampment in each District to be composed of such organizations of the three arms in the District as might, in the judgment of the Inspector of the District, appear to be prepared for advanced instruction in the elementary principles of minor tactics. Each State in the District should, if practicable, be represented in this camp and the troops should be selected the preceding year from those making the best appearance in the State camps, but not more than forty per cent. of the aggregate strength in any State should be withdrawn for duty in District encampments.⁴⁴ There would thus remain under State control sixty per cent. for sudden emergencies. The District camp-ground should not be permanent, but should be changed from year to year to different points along the national frontier, or, in interior districts, along the principal water courses. The

site for camp should be selected by the Commanding-General of the Army, who should also detail a suitable officer of the Army to command each camp. All available troops of the Regular Army, except those detailed to National Encampments should be required to participate in District Encampments. In districts composed of sea-coast and Gulf States the encampments should be near landing-places, where practice in embarkation and landing of troops, rearing earth-works, practice with heavy artillery and co-operation with naval vessels could be secured. The methods of rapid concentration of troops at these points and familiarity with the military geography of the coast frontier and with the means of its defense would thus be secured. No attention should be paid to the nice distinctions of the drill-book, the troops selected for District camps being presumed to have attained in State camps and armories sufficient proficiency in this regard. As much time as possible should be devoted to "practical instruction in military engineering as applied to the construction of shelter-trenches, rifle pits, abattis, fascines, gabions," etc., and to reconnoissance, passage and defense of defiles, and the speedy preparation of means for crossing streams.⁴⁵ At least one day should be devoted to practical skirmish firing in the field, and lectures should be delivered to the officers by the commanding officer, and by a medical officer upon camp sanitation and care of troops in campaign.⁴⁶

Of the fourteen days allowed for District encampments, two would be consumed in assembling and returning home, and two Sundays would intervene, leaving but ten actual working days. This is in excess of the highest period authorized in any State, and although far too short to cover the desired course of instruction, is probably as long a time as officers and men could absent themselves from business.

BRIGADES AND DIVISIONS.

Many of the States now have their troops organized into brigades and in some instances, into divisions, with the usual complement of staff officers. In some cases these organizations are found to be very efficient.⁴⁷ While it is competent for Congress to prescribe the organization of the militia, these volunteer State troops, being maintained as a police force, should be permitted to retain the organization which to them may seem best. They will be found in general to conform to that of the Army. For

the instruction of the Reserve, provisional brigades should be formed each year of the troops selected for the District camps at least six months prior to the date of the encampment. The commander should be detailed from the Army or from the Reserve by the Commanding General of the Army. To render the Reserve immediately available permanent brigades and divisions should be organized, the commanders to be appointed as already indicated. The various staff officers should be selected as far as possible upon the recommendation of the Inspector-General of the District, from officers having experience in the same capacity of State organizations. These permanent organizations would be practically identical with those now existing, and in the West and South new brigades, when formed, would conform to the requirements of the Reserve.⁴⁸

For every District, Division or National encampment there should be detailed a Judge Advocate who, during the continuance of the camp should be vested with the jurisdiction of a local municipal court for a distance of one mile from the exterior guard or picket line. This jurisdiction should extend to all offences then and there committed against the peace and order of the camp, and its judgments and executions secured in such manner as the Legislature of the particular State might provide. The commanding officer of a camp should also be authorized to fix the limits of the military reservation to a distance one-half mile beyond the interior or police guard line of the camp, within which no person not connected officially with the camp should be permitted to enter without his consent. In general, visitors should be allowed in camp only on the afternoons of Saturday and Sunday. Troops of the Reserve should have the right of way in all streets and defiles, and officers and men should be privileged from arrest in going to, returning from, and while in attendance at camp.⁴⁹

NATIONAL ENCAMPMENTS.

The Adjutant-General of Reserve should each year select from the most proficient organization in attendance at the last District encampments a number of troops—not exceeding five thousand—to form a National Encampment. The location for this camp should be selected by the Commanding-General of the Army, who should also detail a general officer of the army as its Commander. The administrative and supply departments should be under the

control of the various staff departments of the Army with assistants detailed from the most capable officers and men of the Reserve. The National encampment should continue twenty-one days not including days of concentration and dispersion. Every District should be represented, and the course of instruction should aim to familiarize the troops with the duties and experiences of an actual campaign. Tentage and clothing should be reduced to a minimum, and the occupation and instruction of the troops in marching, reconnoissance, outpost duty, passage of streams, attack and defense of convoys, constructing hasty defenses, and, so far as possible, in the practical solution of problems in minor tactics, should be incessant and unrelenting. The National encampment should be at some point on the Atlantic, Pacific or Gulf coast, or near the Canadian border, and every endeavor should be made to familiarize the officers and men with the topography of the country adjacent to the frontier. The time allotted—three weeks—is believed to be sufficient, and is as much as could be successfully required. It would require ten days for concentration and dispersion; and one month's vacation is about as much as the young man of to-day can secure from business.

The wisdom of providing a National encampment may be questioned, but there can certainly be no influence so potent in securing uniformity and homogeneity in any organization, whether military or civic, as these annual assemblages. To be selected for the National camp would be a coveted distinction, yet within the reach of all, and it would enhance the military spirit of an organization immeasurably. If the Reserve is to be truly National in character, its members must be brought together, from time to time, under one common authority; service for three weeks, elbow to elbow, in the field and bivouac will allay sectional prejudice, create new friendships, and weld the young soldiers of the Republic together indissolubly. The moral effect alone of such an experience would be far-reaching and enduring and well worthy of all the effort made in its behalf.

At the conclusion of each encampment, reports should be made to the Adjutant-General of the Reserve of the maneuvers and instruction had, together with the names of officers whose intelligence and efficiency merit special commendation. These reports should be transmitted to the Secretary of War to be laid before Congress.

The transportation of troops to State encampments should be

provided by the States themselves. Such provision is now made by all the States by a general appropriation for travel both to camps and scenes of public disturbance. For District and National encampments transportation should be provided by the General Government. The cost would doubtless be somewhat heavier than is now incurred by State Governments, as the inducements held out to the railroad companies by State encampments would be wanting. Taking the Ninth District composed of Illinois and Indiana, the total mileage to be traversed for a District encampment may be estimated at about 810,000,⁵³ which would give at one cent per mile a cost of \$8,100, and at two cents, \$16,200. In like manner the mileage of five thousand troops for the National Encampments may be estimated at \$185,000 at one cent and \$870,000 at two cents per mile.

For the National Encampment and the twelve District encampments there would be required for transportation of men, baggage, horses and ordnance, an appropriation of one million dollars.

Recapitulating, we should require for

Pay of 5000 troops in National Encampment, 21 days and 5 days allowed for travel—26 days.....	\$136,500
Pay of 33,000 troops in District Encampment, 14 days.....	485,100
Pay of 62,000 troops in State camps, 10 days.....	623,100
Subsistence, 5000 men 26 days.....	32,500
Subsistence, 33,000 men 14 days.....	115,000
Subsistence, 62,000 men 10 days.....	155,000
Transportation.....	1,000,000
Horse hire, fuel, forage, straw, incidental expenses.....	500,000
Monthly drills and schools in amories.....	350,000
Total.....	\$3,366,700

An appropriation of three million dollars would insure the successful inauguration of the system indicated, which time and experience would develop and perfect.

RIFLE PRACTICE.

No special reference has been made to this subject. Its effectual accomplishment, especially in cities and in the Northern States in winter months, and where proper armory facilities are wanting, is beset with many difficulties. Much, however, has been accomplished in this direction by State troops, notably in Massachusetts,⁵⁴ Connecticut⁵⁵ and New York.⁵⁶ It should certainly be fostered by the General Government, and for this pur-

pose suitable prizes should be awarded in each District, and the men making the best shots in the Reserve—not exceeding one hundred—should be ordered to the National encampment and organized as a company of sharpshooters. The practical wisdom of attempting annual field maneuvers without at the same time providing for some theoretical instruction may be doubted. The citizen-officer, however, has very little time to go to school. By the time he receives his commission his school days are over; but it is believed that a system not unlike that of Canada⁵⁷ might be found practicable, whereby a select number of the more promising and ambitious young officers of the Reserve should receive instruction in a course of studies relating to the particular arm of the service to which they belonged. For this purpose a limited number of subalterns from the Reserve—say one or two from each District—should be detailed, after satisfactory examinations as to their qualifications, for duty at the various schools of application. For the instruction of officers of higher rank, and those who would be unable to separate themselves for long periods from their usual vocations, a military college should be established in each District for an annual session of one month. One officer from each regiment in the District should be detailed, by judicious selection and with an alternate, for this course.

Instruction should be had principally by lecture and in the solution and discussion of problems in minor tactics, and upon hypothetical situations based upon the military geography of the District. All officers of the Reserve, so desiring, should be admitted to this course, but only those detailed should be "on duty" and receive pay.

TRANSFERS.

Finally, it might be found practicable to reduce the high per cent. of losses now arising from the continuous westward movement of the young men of the country by transfers. But a large share of these losses, especially in the West, is due to change of residence to towns having no military organization. This cannot be remedied. No discharge, however, should be granted for non-residence merely; every man should be retained on the rolls his full enlistment period, and subject to call in case of actual War.

CONCLUSION.

The investigations made by the writer in the preparation of

this paper disclose the fact that little can be proposed claiming the merit of originality, yet they have equally led him to the conviction that the system herein outlined will be found the only practicable plan which can be devised. No government ever instituted among men was so sensitive to the touch of the people as ours. To give promise to success, therefore, our Reserve must be popular, for in matter of defense our legislators are exceeding loth to move, and, indeed, seem already to have arrived at that melancholy state anticipated by De Tocqueville, in which they "regard every new theory as a peril, every innovation as an irksome toil, every social improvement as a stepping-stone to revolution, and so refuse to move altogether for fear of being moved too far."⁵⁸

Since the days when the fathers instituted the Militia system of 1792, we have advanced to the foremost rank among nations, standing first in wealth, first in production of brain and hand, in invention, manufactures and agriculture and first in the excess of national revenues over expenditures. Of forty-two principal nations, only one-half have receipts in excess of expenditures and the annual surplus of the United States exceeds the aggregate of all other nations.⁵⁹ What madness to be last in the security of our national defenses!

"An industrious, and upon that account a wealthy nation," says Adam Smith, "is, of all nations, the most likely to be attacked, and unless the State takes some new measures for the public defense, the natural habits of the people render them incapable of defending themselves."

Landsturm 54.

NOTE.—*For the Notes pertaining to the Prize Essay see "Appendix" to this JOURNAL.*

Honorable Mention.

ORGANIZATION AND TRAINING OF A NATIONAL RESERVE FOR MILITARY SERVICE.

BY MAJOR WILLIAM CARY SANGER.

NATIONAL GUARD, S. N. Y.

A RECENT REVIEW of the "Present Position of European Politics" by the author of Greater Britain, begins with the statement that "the present position of the European world is one in which sheer force holds a larger place than it has held in modern times since the fall of Napoleon."¹ The vast armies and powerful navies of Europe, which are maintained at such enormous cost, prove the truth of this statement, and are inevitable consequence of this "Reign of Force." It has been estimated that during the year 1886, there were over 4,000,000 men under arms in Europe, that the forces available for War, including Reserves, were over 16,000,000, and that there was spent on armies and navies no less than £187,474,522 (\$937,372,610.)² Large as these figures are, they will be materially increased during the present year. All the great nations of the world, except America, have steadily improved and strengthened their armies, navies and fortifications; every country on the continent of Europe, except Belgium, has consented to adopt universal military service, and all pay taxes to support their military establishments which would be enormous even for a country so rich as ours.³ While other nations have patriotically borne the heaviest burdens in order that they might be prepared to resist the dangers which threaten them, we have manifested the most utter indifference to our unquestioned military need; with an overflowing treasury,⁴ we have spent practically nothing on forts and guns, and until

recently nothing for our Navy. We have supinely permitted our armed strength to become relatively the mere shadow of its former substance; forts, which in 1860 were the best in the world,

	Area Sq. Miles	Population.	Peace Footing.	War Footing.	Annual Appropriation.
France.....	204,000	37,000,000	425,000	*2,500,000 or 3,000,000	\$120,000,000 for land de- fenses and Army.
Germany.....	298,624	46,000,000	450,000	†2,700,000 or 3,600,000	\$90,000,000
Great Britain and Ireland..	129,832	35,000,000	Regulars, 138,419. Militia, 141,000. Yeomanry, 14,000. Volunteers, 255,000.	1st and 2nd class Army Reserves, 57,000. Total in- cluding Reserves, 679,522.	£18,393,900 \$91,000,000
Italy	110,620	29,000,000	Army, 252,025. Militia, 377,010	Army, 620,768. Militia, 308,391	280,000,000 lire, or \$56,000,000
United States.	3,501,404	60,000,000 Estimated.	27,000	Militia, 100,000	\$38,561,026

The figures in the 2nd, 3rd, 4th and 5th columns are approximate.

* These figures are not given by the military authorities. They are computed.

† According to the calculations of the French Staff, the total number of armed men which can be drawn upon for all purposes will exceed 7,000,000.—"The British Army," page 161.

General Brackenbury estimates that Germany has spent, since 1870, £30,000,000 (\$1,000,000,000) on armament, fortresses and so forth.

Colonel Maurice, in "The Balance of Military Power," page 97, says:

"Incredible as the sum appears, France is reputed to have expended since 1870, on her re-armament and fortification, '\$135,000,000' (\$675,000,000). A cablegram from a correspondent of the *New York Times*, printed in that paper Jan. 6, 1889, states that since 1872 the taxpayers of the Continent have expended \$7,500,000,000 on preparations for war; that the total war-strength of the seven Continental Powers, counting the Balkan States as one, amounts to 10,480,000; that the total number of soldiers liable to be drawn into the next European war is 28,000,000, and that the total annual cost of the present state of affairs is \$6,000,000,000.

are now absurd, by reason of their utter uselessness,⁵ and during the past twenty-five years, which have seen more advance in military science than any preceding century, we have made no real improvement in the organization of our forces or in any part of our military system. With vast wealth and millions of able-bodied men, we have neglected those simple precautions which common sense as well as military knowledge point out as necessary; and as a result of this "policy of indifference," we have thousands of lives, millions of property and our national honor completely at the mercy of a dozen possible enemies.⁶

The political conditions and military needs of the United States are so totally different from those of the European countries, that the sacrifices which foreign nations are forced to make in order to develop their defensive or aggressive strength, are no proper measure of what we should do. But as the growing importance of the part which the United States must take in the world's progress increases rather than diminishes the number of international questions, with which we as a nation will have to concern ourselves, we are not justified in ignoring either the importance which other nations attach to "sheer force" or the tone which pervades Europe regarding the manner of settling international disagreements; nor should we blind ourselves to the preparations which other countries have made for war, however little we may anticipate that they will be used against us.

Our present condition is the result of indifference rather than of a deliberate or intelligent judgment of our needs; no one has given any good or valid reason why during the past twenty-five years we have adopted for the first time in the nation's history, the heretofore unheard of policy of being absolutely defenceless against those attacks which other nations are so well prepared to make. As a result of the information which has been so ably presented to the public during the past few years, there is, at present, a growing conviction in the minds of many people that our action in this matter has been wrong, and the time is opportune for a careful consideration of the best means to insure a change.

The Navy and its needs and the interesting fact that a system has been suggested for giving it a National Reserve, have been discussed by naval officers whose words are entitled to the greatest weight and consideration.⁷ The defenseless condition of our coasts and what is needed to give us the proper guns and forts have been so often and so ably described, that little could be added to what has already been written. The late General Sheridan, in his last report to the Secretary of War, says, this subject "has been so extensively discussed in the last few years that it is now almost impossible to add further arguments to the cogent reasons already advanced as to the pressing necessity for some remedy for the existing evils," so that in the consideration of what the Nation needs, there only remains the important question which is the subject of this paper, "How Can We Best Organize a National Reserve for Military Service?"

Our Army is relatively to population the smallest in the world, and is almost unique in being entirely without reserves; it is kept small on the avowed principle that it is to serve merely as a nucleus in case of danger, and as a training-school for officers, and yet no steps have been taken to organize the Reserves, which should strengthen and co-operate with it. There are, it is true, many men throughout the country trained in the duties of the soldier, and the Militia in some States possesses much merit, but there is no force which can properly be called a National Reserve for the Army. In discussing this fact and the best way to change it, I shall try to limit myself to those matters which are properly connected with the Reserve; but a National Reserve for military service, to be efficient, must be so closely connected in organization and training with the standing force, that the Reserve cannot be organized or even written about as a separate or independent body. In what follows I shall, therefore, not only state how I think the Reserve should be organized, but I shall also suggest certain changes in the organization of the Army, which must be made if it is to benefit fully from the creation of a Reserve. It may be necessary to refer incidentally to other changes, which are needed to bring the Army more into harmony with the principles of modern military science, but I shall not attempt to discuss the general question of what changes are needed in our military organization.

I shall endeavor to state the principles which should govern the organization of the Reserve and its relation to the standing force, but I shall, so far as possible, avoid the discussion of those details which, by reason of the interest which they always have for the individuals whom they concern, might draw attention away from the more important matters which should first be decided. If our military authorities are once agreed upon the fundamental principles of our military organization, the details of the application of these principles to our forces can be readily worked out.

It may be well to state at the outset that by the "organization" of an armed force, is meant the plan or system in accordance with which its component units are to be constituted and arranged, and by which their functions and their relations to each other, and to the force as a whole, are to be determined, and the best organization is that which enables the force to do its work most successfully, with the lowest cost to the taxpayer and the

least burden to the citizen. "Organization" must not be confounded with the "control" of the force; a recognition of the difference between the two terms makes it plain that the most democratic government can consistently adopt any sound principles of "organization" which have been developed or adopted by other nations, no matter whether such nation is despotic or democratic in its form of government.

In order that any armed force may be well organized, the purpose for which the force exists and the work which it is to do must be clearly understood. The superiority of the German military organization—a superiority so marked that each nation of Europe has embodied some part of it in its own system—is due to the fact that the Germans clearly recognized the work which their Army would have to do, and then developed the system which was best suited to keep their army in a condition to do its work, and which was at the same time in harmony with their national character and institutions. All changes which we may make should, in the same way, be the result of a clear understanding of what we expect our Army to do, and an intelligent judgment that these changes will best secure the desired end.

The work which our armed force may have to do is well known; it may be called upon (1) to keep in order hostile tribes of Indians, (2) to quell domestic disturbances, and (3) to repel attacks from foreign powers. As our force, notwithstanding its present defective organization, can do all that may be required of it under the first two heads, I shall pass at once to what our armed force needs in order to resist successfully foreign attacks, with the statement that the changes which I recommend in the organization of our forces will facilitate the performance of any duty, under the first or second heads, to which the Army may be ordered.

No one can deny that international complications, which might lead to war, are always possible. The character of the attack, which in such a case would be made upon us, has often been described by military authorities; the danger which threatens us is an attack on our sea-coast, and the capture or ransom of one or more of our large cities.⁸ No nation will attempt the conquest of our vast territory. The fact that during the Rebellion we waged a war for four years and maintained a million men under arms, and hardly felt the drain in men and money, has proved to the satisfaction of the military authorities of the world

that the conquest of our country is impossible. No nation or nations could maintain, so far from the base of supplies, a force sufficient to attempt such a task. Our vulnerable point is our coast, dotted with rich and populous cities; these cities will be the first object of attack when we are involved in war with any foreign nation, and their capture or ransom would entail a money loss and a national humiliation, doubly unpleasant to consider, since we know that if attacked we are at the present time utterly unable to avert them. Naval attacks on our sea-coast would probably be accompanied by the landing of troops to co-operate on shore with the hostile fleet. "To gain a footing on an enemy's coast, and disembark a substantial body of troops there, is now one of the easiest operations of war, provided that the defenders have not a superior naval force, capable of crushing the invader's fleet, which could cover the operation;" or provided the "superior naval force" is not present. A hostile force might at the same time be thrown across the frontier, in order to draw off some of our troops, or to capture or destroy places or property. It cannot be too strongly emphasized that our enemies will act on the admitted principle of modern war, that attacks must be sudden, that the foe must be overwhelmed with force and numbers at the outset, and that the beaten side must pay the expenses of the contest, and that consequently our defense is not complete unless we have a force properly trained to resist such attacks at short notice. A month would probably be too long a time to count upon for preparation, and as our overflowing treasury cannot secure for us in time of peace a single modern heavy sea-coast gun in less than eighteen months,¹⁰ and as one year is the shortest time which any military authority has ever named for properly training a force of infantry, the futility of relying on what we can do when war is threatened is apparent.

For the purpose of resisting such attacks our army is, by reason of its numerical weakness, impotent; it can not supply the necessary artillery to garrison our forts, the submarine miners for our harbors, or the engineers and infantry for defensive campaigns, not to speak of our complete inability to strike an offensive blow, without the power to do which no defense can be considered complete. Our people will never consent to keep a standing force sufficient to supply these needs; and, in fact, there is no reason why they should. We must, therefore, rely upon a Reserve, and this Reserve, to be of any value, must

not only be available on short notice, but it must be properly trained.

With our treasury overflowing and more than seven million able-bodied men liable to military duty, it would be easy to devise a system which would give us a force so strong as to be invincible, but any system, however good, in theory, is practically useless, if it is not such that the people will approve and adopt it. We must remember that practically we are restricted to the men who voluntarily agree to do military duty, and that only a relatively small sum of money is likely to be appropriated for military purposes; the system which we must adopt then, is one, which in spite of limitations of men and money will supply, in time of need, the necessary number of men, adequately trained.

I have attempted in what follows to outline such a system, and one which is thoroughly American. I can make no claim to originality in regard to it; most of its features have been suggested at one time or another, and nothing is recommended which has not been successfully put into practical operation in one country or another; in fact, I am not sure that this entire paper could not have been made up of extracts from authoritative writings; it differs, from what has already been written, chiefly in treating our armed force as a whole and in stating certain broad principles of organization applicable to all arms and to the entire force, a method which is of course necessary to a properly organized force with the proper harmony between the various parts.

In speaking of the "Reserve," it is perhaps not unnecessary to note that the word has two somewhat different meanings; it is used to describe men who are members of an existing military formation, but not doing active duty with it; who can be ordered out to take their places in existing formations, and thus raise the numerical strength of the batteries, companies, battalions or regiments to their proper war footing; these men do not form a new or independent force. It is also used to describe an auxiliary or independent force, which is intended to support or aid another force which may or may not differ from it in organization or general character. The use of the word to describe that portion of a fighting force which is held back during battle, is restricted to actual campaigning and does not concern us in discussing questions of organization. We need both kinds of Reserve, and I shall speak of both in what follows, but it has seemed to me best in this paper to use the word in the first sense as describing those

men who can be called to their places in an existing force, the numerical strength of which it is desired to increase; it will avoid confusion to restrict the word to this meaning, because the Army, the Militia and any new force which might be created, should each have its own Reserve.

The principal features of the system I would recommend may be stated as follows:

1. In the first place, all the military forces of the country should, for the purpose of organization, be regarded as a unit; they should be organized as component parts of our total armed strength, and should be trained with a view to their being suddenly called into active service.

2. The Army should be given a Reserve of its own by adopting the system of short service with the colors followed by a period in the Reserve.

3. The territorial or localization system should be adopted for the Army. Military divisions, such as now exist, should be subdivided into districts, and each district should have its military unit, the forces in each district being recruited from men living in the district. This, it may be said, is absolutely necessary if we are to have a Reserve which is to be rapidly mobilized.

4. Congress should, by virtue of the power vested in it by the Constitution, organize and arm the Militia.

5. In addition to the Reserve, for the Army, which might be called "The Army Reserve," a new national force should be created; there is room for a wide difference of opinion in regard to the character and composition of such a force, but for the reasons given later, I recommend that its largest unit be a battalion, and that it differ from the Army only by the fact that the active military duties of its members would be limited to a short time in each year, as, for example, four weeks, the entire force being, however, liable to be ordered out for an indefinite time, whenever the Commander-in-Chief should decide that the country needed its services.

6. All the forces should be practically trained in fort, camp and field, by manœuvres and otherwise, in the kind of work which they would be called upon to do in time of War.

I. UNITY OF ORGANIZATION.

To say that we should have some recognized and carefully thought-out system of military organization, and that all our

available forces should have their proper places in this organization, each portion of the forces having its due relation to the other portions and to the force as a whole, would seem to be but stating truisms; but these fundamental principles have been ignored by us, and our forces are at present organized under more than forty different authorities. I shall have occasion later to point out in detail some of the evils which result from this condition; it will be sufficient to mention here that evils exist, to remedy which it will be necessary for the central Government to exercise its unquestioned constitutional right and organize those forces which it may at any time be obliged to employ. To make such organization complete and effective it is necessary that all our available force should be regarded as a unit, and each branch of Service, as well as each part of the force now under an independent authority should be organized and treated as a component part of our entire armed strength.

II. SHORT SERVICE AND AN ARMY RESERVE.

A Reserve should be created for the Army by reducing the time spent with the colors so that an enlisted man would only be in active service a part of the term of his enlistment, after which he would pass into the Reserve for the balance of his time; during his time in the Reserve he would remain subject to orders to rejoin the colors at any time, but would be permitted to return to his home and be free to engage in any occupation; in return for his liability to be called out at any time, he should receive from the Government a small sum at regular intervals, say semi-annually.

These men should be required to report in person at certain designated places to receive this payment, and thus the real numerical strength of the Reserve and the situation of the men who compose it would always be known with comparative accuracy. That a certain number of men in the Reserve might fail to report when ordered out, or might attempt to draw their Reserve pay by proxy while themselves away, is, of course, possible; but failure to report, say once a year, unless absent by leave, or to be present when ordered out, should be treated and punished as desertion. This, with the improvement in the class of men who enlist, would diminish the proportion of such cases.

This system creates a reserve composed of men who have been trained in the Army and by the officers under whom they

will have to serve. They do not form an independent or auxiliary force, but when called out they take their places at once in the Army, of which they have been and still are a recognized part. The system increases the available strength of the Army and it makes that strength available in the shortest possible time, and it also enables the country to train more men for any given sum of money, for it must be remembered that the longer the service the fewer men can be trained for the same cost.

In recommending shorter time of active service, I would not be understood as maintaining that two or three years' training will accomplish as much as five; but our military system cannot be ideal, it must be what a writer on the same subject in another country has called a practical "approximation to the ideal." Taking into consideration our military needs, our political and social condition, and the present relation of our army to the people, I do not hesitate to say that five years' service is too long, and that the Army and the Nation will benefit if the time of active service is shortened.¹¹ As the country will not maintain a large force under arms, we must avail ourselves of the best system for increasing the available strength of the Army at small cost, and as short service followed by a time in the Reserve accomplishes this, we are justified in limiting the length of active service to the time requisite to turn out an efficient soldier. The Germans say that a perfect infantry soldier for offense can be formed in two years and for defense in one, and it is their intention to reduce the entire infantry service to two years.¹² At present in France and Germany the longest period of service in any arm is from three and one-half to four years. I do not, however, feel called upon to argue in favor of any specified time, as my contention is for the principle of a shortened service with the colors, followed by a period in the Reserve, leaving to the proper authorities and for discussion at some other time, the determination of how long that service should be. Short service entails extra work upon the officers, and more attention must be given to an officer's capacity to turn out good soldiers; but the benefits of the system more than compensate for any disadvantage it may have.

Among the advantages of the system of short service is the fact that it increases the size of the Army, although only a small number of men are under arms at any one time, and it does this in the most economic manner possible. If, for example, we have

20,000 enlisted men, and have them serve two and one-half years with the colors, and then pass them into the Reserve for the same length of time, we should have 20,000 men always with the colors, and 20,000 additional always in the Reserve. These additional men, if paid \$12 per man per annum, would cost the country \$240,000 yearly, or if paid \$24 per man, \$480,000; and estimating that the men in active service receive \$156 per annum, or a total of \$3,120,000, we would practically double the size of our Army, or at least double its available strength, by increasing our expenditures from 8 to 16 per cent. This does not include any estimate of the expenses of uniforms, arms, etc., nor does it take into account the saving in rations, etc. If the time of active service was reduced to two years, with four years in the Reserve, we should have 20,000 men with the colors, and 40,000 in the Reserve, thus increasing the available strength of the Army 200 per cent. by an increase of the expenditure from 16 to 32 per cent.

If the number of enlisted men is increased to 30,000, in accordance with the recommendation made by the late Lieutenant-General of the Army in his last four reports, that 5000 additional men be enlisted, and these men serve, say three years with the colors, and then pass into the Reserve for two years, we should have 20,000 men in the Reserve, or an available force of 50,000 men, as against our present 25,000, for an increase of from \$1,020,000 to \$1,260,000 per annum, according as the Reserves are paid \$12 or \$24 yearly.

The figures which I have given are but illustrations of what can be done under this system. The amount paid the Reserves and the length of active service and time in the Reserve, being the factors which determine the expense.

I do not think that the "money argument" should be given more than its due importance, but the difficulty of getting suitable appropriations from Congress gives interest to the question of getting more for any given sum of money, an interest which is not diminished by the fact that our army is relatively in numbers, the most costly in the world.

Another great advantage of short service is that it trains a large number of men, thus increasing the proportion of our citizens who have had the experience of army service, and who are consequently competent to render the country some service in time of need. For example, if the active service were two and

one-half years, and the Army 20,000 strong, 40,000 men would be trained every five years as against 20,000 under the present system.

Our Army is limited in size by the will of the people, and we are apt to feel that our military power is therefore irreparably weakened, but the system to which I have referred offers a way, with little or no additional expense, of increasing our available strength to almost any size we may desire, and of infusing into the people a large proportion of well-trained serviceable men who would be of the greatest¹³ value in an emergency.

III. THE TERRITORIAL SYSTEM.

As the territorial or localization system has been adopted in almost every country but our own, and as its principles are well understood, but few words are needed in regard to it. It consists in subdividing the large military districts, such as our present military divisions, into smaller districts, each, of which should have its own military unit, either regiment, brigade or division, this unit being recruited from men living in its district. My suggestion would be to make this unit for the army a regiment, in which case these districts would be called Regimental Districts, but in order to avoid, so far as possible, questions of detail, I shall call them simply Military Districts. It is plain that the principles of the organization of the forces within them will be the same whether the unit is a regiment, a brigade or any other formation. Each district should have a number, and also a name descriptive of the territory which it embraces.

The possible evils of the localization system have been pointed out by those who do not favor it;¹⁴ they have suggested the difficulty of equalizing the division of territory, and securing the proper quota from large cities and sparsely-populated country regions; the danger of the development of local rather than national feeling, and the interference of politicians with a system which, by reason of its local character, comes within easier reach of their influence. I do not myself attach much weight to these objections, but the source of these criticisms entitles them to careful consideration, and the objections to any proposed change should be as carefully considered as its advantages. I am prepared to admit that our social and political conditions are so different from those countries of Europe which have adopted the system, that their unqualified approval of it is not conclusive for

us. In considering these objections it must be remembered that enlisted men under this system can be sent to any part of the country in the same way as under the present system, and should any evils be found to result from keeping the men always in their district, they could be sent in any number that might be necessary to serve in other parts of the country. And when all is said against the system, there remains the fact that it is essential to the organization of a Reserve which can be rapidly mobilized.

Any man in the Reserve wishing to change his residence should be permitted to do so, and should thereupon be transferred to the Regiment of the District to which he moved. A like privilege might be given, under proper restrictions, to a man serving with the colors.

I think we may consider that the Army exists to meet foreign enemies, and that it must be organized with a view to repelling invasion, and that the Reserves who are to take part in this work must be available at short notice. Even if it be admitted, for the sake of argument, that when a foreign force lands in New York, or crosses, let us say the Canadian frontier, we should not oppose them with regiments composed of men who have a personal or local interest in New York or in Pennsylvania or in Massachusetts or in other threatened States, but with regiments made up of men who come from Washington Territory, Colorado, the South and the East indiscriminately, the fact remains that wherever these men come from, they must be able to take their places in the ranks as soon as the danger threatens. The first principle of modern war demands that we should be prepared to resist sudden attacks, and no one has yet devised a system which makes possible the massing of large bodies of Reserves so quickly as the territorial or localization scheme.

This territorial system undoubtedly develops and stimulates a local interest in the regiment, but this very interest is a most important factor in recruiting, a direction in which it is of the utmost importance that our Army should be strengthened; but quite as important as this, is the fact to which I have referred that the system is absolutely necessary to the creation of a Reserve which can be rapidly mobilized. We have become accustomed to regard a Reserve as a force which is quite independent of our Army, and which is to be organized or called into active service after hostilities have been threatened or the Army has en-

tered upon the first active duties of the campaign. Whatever we may do in the direction of organizing such a force, we should also give our Army what all the principles of modern military science demand that it should have, viz: its own Reserve.

I have said that I did not intend to discuss in this paper any questions not connected with the organization of a Reserve, but there is one feature of our present military organization, more or less closely connected with the changes which I suggest, and especially with the territorial system, to which I feel compelled to refer; that is the excessive centralization which mars our present military organization.

The English and ourselves have both retained the bad features of a system which modern theory and practice alike condemn. General Schofield, in his last report, has pointed out certain evils of this excessive centralization so clearly and forcibly that it is unnecessary to do more than refer to what he has said.¹⁵ I shall, therefore, mention certain other defects in the system which were clearly shown in the Franco-Prussian War. France had a centralized military organization not unlike our own, and it broke down completely under the pressure to which it was subjected. Their corps, division, and even regimental commanders were obliged to apply to the authorities in Paris for everything which the force needed to fit it to take the field. The French authorities in Paris were distracted by the demands for arms, by questions concerning transportation, where recruits should be sent, how men in one part of France could be got to their regiments in another. In Germany the organization and preparation had been so complete in each district that the German military authorities were freed from the need of supervising all petty details and were at liberty to consider how the campaign could be best begun and carried out; they naturally profited by this condition of affairs. Their official account of the War tells that the first orders issued from Berlin were that the army should concentrate on the frontier, but the fact that the French were found to be massing their troops on the same line, led to the conclusion that this must be the result of an organized plan for invasion which it would be safer to resist with the Rhine as a base, and in consequence the first order was changed; but when it was discovered that the French troops were in the confusion which characterized what might be called their organization on the field of battle, the order was again changed and the German troops

were sent to the frontier. If the lesson of that contest is learned, actual warfare will never again present so clearly the contrast between a force like that of France, dependent on a centralized system, not only forced to wait for the time of danger to complete its organization, but obliged during the consequent confusion to apply to a central authority for instruction and supplies, and an army like Germany's with a decentralized organization, complete preparation in each locality, and leaders free to make their plans for defeating the enemy, instead of being forced to exhaust their energies in getting their own men ready to fight.

We should profit by that lesson, and should avail ourselves of the territorial system as a means of correcting some of the evils of our present centralization. We should have in each district a completeness of organization and a more or less thorough preparation for war, for which the officer commanding the district should be held responsible. He should be required to see that the administrative departments within his district were efficient, and that the necessary stores, supplies and material were always on hand; the central authorities would thus be in a position to consider the great questions of any war or campaign, without being burdened with the minute details of all the work of the administrative departments in the different parts of the country.

The infantry regiments should be organized in battalions, consisting of from four to six or eight companies. In time of peace the men with the colors would not form more than one battalion, but when the Reserves were called out, a second or even third battalion would be at once filled up. "Nearly all the armies of Europe are agreed on the three battalion formation of the infantry as the only proper one for modern war, and our infantry should have it, not as a matter of promotion, but simply as a matter of organization, a step nearer reality in time of war." ¹⁶

There should always be a sufficient number of officers to supply the second battalion at least. The importance to the nation of having thoroughly trained officers for its soldiers is too often ignored, and cannot be too earnestly insisted upon. War has become a science in which the valor of the soldiers is only valuable as a supplement to the talent and ability of their leaders, and good officers are now absolutely necessary to an army's effi-

ciency, and no part of the nation's defense is more important than a body of well-trained officers.

The territorial system should be applied to the Infantry, Artillery and Engineers, although the districts need not be the same for the various arms. It might also be applied to the Cavalry; but the difficulty is so great of getting at short notice the proper number of trained horses for the Reserve, that the drift of the best authorities is in the direction of keeping cavalry at nearly its war-strength in time of peace. If we adopt this principle, or if we find it inadvisable to keep a Reserve in this arm, one reason for localization is taken away; but the other reasons are, in my judgment, sufficient to make it advisable to apply the system to this arm of the Service.

It has been truly said that a volunteer army, which is not popular, is an anomaly. Our force can hardly be called "popular" with our present number of desertions. "The Army is still 1600 below its authorized strength, and the rate of enlistments for several months has not been commensurate with the losses," notwithstanding "that recruiting officers have had instructions to make all proper efforts to secure the necessary number of men to fill the ranks of the Army." Although I believe that shortened service would, to a great extent, remedy this evil, I think that the plan recommended by the Adjutant-General,¹⁷ that an enlisted man should be permitted to purchase his discharge "by the payment of a sum" sufficient to reimburse the "Government the expense of recruiting and transportation" is entitled to the most careful consideration. The effect of such a rule would be quite as efficacious in increasing the number and raising the character of recruits, as in diminishing the number of deserters.

Under the territorial system the men ordinarily serve in the vicinity of their homes, though they are, of course, liable to be sent away. The nearness to their homes combined with short service and the possibility of getting a discharge by a fair payment, would attract to the Army not only many more men than are now willing to enlist, but would insure the enlistment of a class of men who are not now willing to enter the Service. The class of men who now wish to enter the Service is indicated by the fact "that notwithstanding the pressing needs for recruits" nearly 72 per cent. "of the whole number" of applicants for enlistment were rejected on account of physical or mental disqualifications.

These various changes which I have suggested would improve the class of recruits, would bring the Army into closer relations with the people, and would increase the number of those who, in each community, have a personal interest in and knowledge of the Army. At present the Army is less understood by our citizens and there is less sympathy between it and the people than in monarchical England, Republican France or Imperial Germany. There was a time when every country considered a standing army a menace to the liberties of the people, and it is a curious fact that in America, where there is less real ground for any feeling against the Army than in any country of the world, this prejudice and feeling of distrust is the strongest. Furthermore, our Army is antiquated as well as unfortunate in having an excessive proportion of men who enlist because they are incapable of doing anything else, or because, as it has been well put, they desire "to escape moral troubles of various degrees." We have been the most backward nation in raising the tone and standard of the enlisted man. The territorial system and short service, with its consequent improvement in the class of men who would enlist, would have great influence in correcting these evils.

IV. THE ORGANIZATION OF THE MILITIA BY CONGRESS.

The present organization of the Militia has so many serious defects that some of our best officers think it impossible to make it a serviceable Reserve for the Army; this feeling has found expression in bills which have been presented to Congress, providing for the creation of a new national force, which should supplant or absorb the Militia. But admitting that the Militia fails to fulfill the intention of the framers of the Constitution, who thought that it would, with the Army, constitute all the fighting force we should ever need, and notwithstanding that some new and differently organized force is necessary to our proper defensive condition, I am still of the opinion that the Militia can be so organized and trained as to become a most efficient force for National purposes, and thus of great value to the country; and before any new force is created to take its place, an effort should be made to develop the Militia into a national force occupying a recognized place in the armed strength of the Nation. It has the advantage of being in existence; it is older than our Constitution, and is recognized by it. It is the force which our people have been brought up to regard as the source of our military strength, and

consequently it has much popular sympathy and confidence ; it therefore seems to be most desirable that all proper efforts should at once be made to develop the national side of this force, thus widening the sphere of its usefulness and giving it a more important place in our military organization. I shall therefore state how I think this can best be done before speaking of a new national force.

Perhaps I should preface what I shall say about the Militia with the statement that no one can have a higher opinion of its *personnel* than I have, and I trust that it will be plain that the criticisms which I feel compelled to make are directed against the system under which it is organized, and not against the officers and men.

As at present organized, the Militia is in no sense a Reserve ; it is hardly an auxiliary force in the proper sense of the word ;¹⁷ there are forty independent forces which are under no real national supervision or control ; these forces are organized and trained entirely without regard to national needs and without any idea of co-operation with the Army. It is impossible that any force which is composed of troops organized under so many different authorities can have the cohesion necessary to a successful fighting force. Nor can it be expected that such a force would have anything like a proper proportion of the various arms. If all the Militia should be ordered out, we would have about 100,000 men, practically all infantry. It is impossible to call one hundred thousand infantry without cavalry, artillery or engineers an army in the modern sense of the word. Our present position is the result of a very general, though not carefully thought out conviction that in case of war we would, as General Schofield says, at once organize a new fighting force with its proper proportion of the different arms. To this point the attention of the Militia should be specially called, and their position with regard to the question should be clearly defined ; it would be useless to try to increase the efficiency of the force for national work, if the Militia itself does not wish to have this accomplished. Any change in the force to be successfully made, must have the co-operation and approval of the men who compose it, and they must decide whether their present defective organization is to be improved. No one questions their bravery, but bravery is not enough for an army at the present time. The great wars of recent years have proved that proper organization, successful per-

formance of all the administrative work of a marching or fighting army, in addition to well-trained officers, are necessary to a successful campaign. The important questions of organization cannot be safely left until war is imminent. We must apply to our forces in time of peace, those principles of organization which will give the best possible system in time of war, so that we shall not be obliged to depend upon the hurried massing of men under threatening danger. My own feeling is that the Constitution, the dictates of patriotism, and last, but not least, the spirit of the Militia, all demand that this force should be changed from a collection of disconnected infantry bodies, into a serviceable and efficient part of the Nation's defenders, capable of taking their places alongside of the Army when the country is threatened from without.

In most States the Militia, as at present organized, is thoroughly competent to supplement the police and preserve order in the State, and undoubtedly some four or five States have forces which have attained a most commendable degree of proficiency in those matters in which they have been trained. Many regiments of infantry are capable, with a little practical training, of doing most important and valuable work; but the Militia taken collectively is not capable of taking the field as a fighting force. Not only is it without cavalry or field artillery, which a force such as our Militia cannot be expected to have, but it has no transport service, and with some notable exceptions, no medical service or properly trained staff. There is no plan or system in accordance with which the forces of the various States would take their proper places as parts of an operating army, or troops from different States be brigaded or assigned to divisions or army corps, or by which general officers would get commands. Nor has any plan or system been adopted of employing them collectively with the Army. Nor is the Militia organized as a complete unit in each State to resist the danger to which its State is most exposed, or even to aid the Army in this work. If we were involved in war, our first and greatest, one might say our only danger, would be from attacks upon our important sea-coast cities, such as New York, San Francisco, Boston, New Orleans, etc.¹⁸ Our artillery would be utterly powerless, by reason of its numerical weakness, to garrison the few forts which we possess, or serve the few guns now in them. Take, for example, the forts in New York Harbor. There are at present¹⁹ service-

able smooth-bores and converted and other rifles, mounted or in position to be mounted, in the New York Harbor forts, which would require for a single day's action, with three reliefs, over six thousand men. The Fortifications Board, assembled by the President under Act of Congress, approved March 3, 1885, stated that the proper defense of New York Harbor calls for 239 additional rifled guns and mortars; these guns would require at least 6,000 additional men: and if the recommendations of the Board are carried into effect, as they most certainly should, and probably will be, we should require at the lowest estimate 13,000 artillerymen for New York Harbor and 85,000 for all our forts; but considering for the moment the conditions as they now exist, we find that New York alone, with its present insufficient armament, needs over 6,000 artillerymen for one day's action. We have at present 3,000 artillerymen, and if every artilleryman in the Army was sent to New York Harbor, there would be over 3,000 men, too few to serve the present insufficient number of guns in one day's action. One might suppose that the New York Militia would be the force to supply the needed men, but out of the 13,000 men who now compose that force, there is not one company trained to serve heavy sea-coast guns or guns of position. There are three light batteries armed with Gatling guns and 12-pounders, and one of the infantry regiments spent a week in one of the harbor forts five years ago; but with these exceptions, the force has never seen a mounted gun when on duty.

As the value of artillery depends largely on the skill of the men at the guns, and as men are almost useless without training, it is made sufficiently plain, I think, without additional illustrations, that the best of our State Militia is liable, under State control, to be utterly unable to render that aid to the Army and to the country which may some day be sorely needed. This aid, I believe, it is the duty of the Militia to be able to render. That this force, under the Constitution, exists for national as well as local purposes, hardly seems to admit of doubt. The Constitution says: "Section 8. The Congress shall have power to provide for calling forth the Militia, to execute the laws of the Union, suppress insurrections and repel invasions, to provide for organizing, arming and disciplining the Militia, and for governing such part of them as may be employed in the service of the United States, reserving to the States, respectively, the appoint-

ment of the officers and the authority of training the Militia, according to the discipline prescribed by Congress." And "the President shall be Commander-in-Chief of the Militia of the several States when called into actual service of the United States."

It further provides that "No State shall, without the consent of Congress, keep troops or engage in war unless actually invaded, or in such imminent danger as will not admit of delay."

Unfortunately, the central Government has for many years failed to do anything of practical value toward improving or developing this force, and consequently the States have been forced to do everything themselves, including organizing, arming, disciplining and paying for the force. This has resulted practically in just what the Constitution forbids, viz.: State armies, or at least in the creation of independent forces having little or no connection with each other or with the Army, and differing widely from each other in efficiency and merit.

But the right of Congress to organize and discipline the force has not been lost by non-use, and my contention is, that the express power given by the Constitution should be used, and the force organized with a view to the service which it should render the country when called into its service. To what extent the organization of the Militia should be changed depends largely upon the purposes for which it exists. If it exists to train, under conditions which insure pleasant associations and agreeable friends, a certain number of men in the duties of the soldier, so that they will be fitted to take their places as officers or otherwise in such force as is to do the fighting when war breaks out, there is comparatively little reason for changing the organization of the force. But if it is intended that the existing organization should constitute a part of the armed strength of the country which is to be available for campaigning, and fighting when the nation is threatened, there is need of changing the present organization so far as may be necessary to enable the force to perform successfully these national duties. In the changes which I have suggested I have endeavored to preserve, so far as possible, the existing conditions of this force; not because they are the best that can be devised, but because any changes made in this force, to be successful, must have the approval of the men who constitute it. The feeling of regimental and State independence must be recognized, and any changes must not only be such that in the judgment of the force they

will enlarge the sphere of its usefulness, but they must also leave unchanged, to a greater or less extent, the organization and methods of the force to which so many men and officers are warmly attached. If efforts are wisely and judiciously made to bring the Militia in closer relation with the Army, and to establish the point that it is a fighting force as well as a training school, such efforts will not only be successful, but they will owe their success largely to the hearty co-operation of the members of the force. I think the future of the State Militia depends largely upon the position it takes in regard to this matter. If it develops its national side, I believe that it will have an opportunity to assume an importance such as no force composed of men with civil pursuits has ever attained. If, on the other hand, the various forces insist upon maintaining their present independent State organizations, it will become absolutely necessary for the country to create some force, purely national in organization, to do the work which the framers of our Constitution intended that the Militia should do, but which, under their present system of organization, it would be idle to expect of them.²⁰

It should be understood that bringing the Militia into closer relations with the Army, in the proper sense of the phrase, only means that the sphere of usefulness of the Militia will be widened, that it will be given a more important and responsible position as part of our armed force, that it will have a chance to learn many things more useful and interesting than the dry routine of armory work, and at the same time that its present regimental organization will not be changed, and the amount of work will not be increased.

If the class of men who enlist in the Army is improved, as it certainly should be, and if the Militia recognize the advantages which would result from its accepting a wider sphere of usefulness and responsibility by taking its place in the forces which are organized for the country's defense, the two forces would naturally draw nearer together; the tone of the Army would be raised and the Militia would have its efficiency and usefulness increased, and would justly stand higher in the estimation of the people.

The following suggestions in regard to the reorganization of the Militia are made with the conviction that the men and officers of that force will be the first to welcome any change which will enlarge the sphere of their usefulness to their country.

The changes necessary to accomplish this result must be

gradual, and the following suggestions are made with the conviction that it would be impossible to go further at the start in modifying the present organization of the Militia.

The military districts adopted for the Army should each consist of one or more States; when the District embraced more than one State, each State should form a recognized sub-division of the District. All the forces in a district, Regulars and Militia should be organized in brigades. The Militia regiments in each State should have their designated places in these brigades, which should contain the proper proportion of the various arms. The brigades should be united in divisions, and the divisions in army corps. When the forces in any State were sufficient to form a division, they should be so combined, and when insufficient, brigades from different States should be united for that purpose. The regular regiments should have their places in the brigades. In all these formations the present character of the Militia regiment should not be in the slightest degree changed or affected. Army officers should be assigned to the command of the brigades, the divisions and the army corps. The authority of such officers in time of Peace would be limited to such matters connected with the "organizing, arming and disciplining" the Militia as Congress should see fit to retain for the national government. As a matter of fact, this authority would hardly be more than nominal. The army officers could not assume command of the Militia except when it was ordered out by the President, or when the Militia volunteered for special work, as in the case of the proposed manœuvres to which I refer later; these officers would, however, be entitled to receive reports on all matters connected with the organization of the Militia regiments; and as a natural consequence of the constitutional authority of the national government, they would have the right of inspection. Such a system would accomplish two desirable results; it would, in the first place, give every military formation in the country its proper place in a carefully considered and comprehensive military system, and the Government would be constantly informed of the condition and efficiency of all the various forces, over which it could, in time of need, exercise control; and secondly, it would establish a connection, however slight, between the Militia and the Army, a connection which I cannot but feel would grow closer and closer, and would be of great value to both forces. Furthermore, the Government would be enabled to insure having

a proper proportion of the various arms in each district ; it could not, of course, order an infantry regiment to become a regiment of artillery, but it could determine how many infantry regiments it needed in a given district, and it need not include in its system of organization regiments which it did not require. If it were found that any needed arm of the Service was not sufficiently popular to attract recruits, the Government, by extra allowances to members or to the organization, could easily secure the necessary number of recruits.

It would be possible under this system to adopt Gen. Schofield's recommendation that the Militia should "be relied upon largely for the seacoast Artillery Reserve."

A dual command is admittedly bad, but I see no way of avoiding at least the semblance of it, if the Militia is to be in any way connected with the Army ; the States would undoubtedly consent to follow the national plan in regard to what should constitute a brigade or division, but they would properly wish to have their own general officers. A conflict between these officers and the army officers assigned to command the brigades or divisions, would be practically an impossibility. The militia colonels would send the necessary reports direct to the army officers commanding their brigade, and this officer would have no obstacles placed in the way of his inspecting the regiments, or of doing any other act which Congress under its constitutional power should direct him to do ; but here in time of peace his authority would end ; in time of war there would be the possibility of conflict of authority, but no more than there is at present. The President can at any time when the nation's need requires, order any militia regiment to report to him directly, and can place it under the authority of any officer of proper rank whom he may select. In fact, during the last War the 14th Regiment of Brooklyn went to the front under orders from the President and without orders from, or even the knowledge of the Governor of New York.

The possibility of conflict of authority between army and militia officers is most undesirable, but it exists in name rather than fact ; and I can think of no way of avoiding it entirely ; the relation between the forces which I have suggested seems to have the fewest objectionable features of all the various plans which have been suggested for bringing the two forces into closer relations. I do not think in time of war that any good general officer of militia would have difficulty in getting an assignment to a com-

mand proportioned to his rank. Furthermore, if it is a question between promoting the good of the force or sparing the feelings of certain officers, these officers themselves would say that the interests of the force must first be considered.

The control which the central Government can in time of peace exert over the Militia is, of course, limited by law, and with voluntary service recruits cannot be forced into the regiments; but a proper appropriation by the Government, in return for the duties which it might demand of the force would serve to make the equity of the nation's claims very apparent. The national Government should unquestionably arm the Militia, and supply it with a proper amount of ammunition for target practice. Apart from the proper and legitimate saving to the several States, uniformity of arms to be used by soldiers when ordered out by the Government may be said to be a military necessity. At present the muskets used by the Army are different from those used by some of the States; for example, the New York Militia are armed with the 50-caliber musket, while the army musket is 45; so that the national Government has not a cartridge which could be fired from their muskets if it called them into its service. The Ordnance Department would have to procure and keep a separate supply for these troops, and there would always be the danger that they might find themselves in action with cartridges which would not fit their muskets. A distinguished English Ordnance officer in Barrington's "*Problem of Invasion*," has said "it is impossible to conceive the inconvenience and possibly the disaster, that might result from the fact that the regulars and auxiliaries carry rifles and carbines requiring different kinds of ammunition."²¹

The national Government should also supply the Militia with uniforms and overcoats. The present small money appropriation should also be increased, but its size would naturally depend upon the work which the Militia might do in connection with the regular forces. Arrangements should be made each year by the Government to give those members of the Militia who might volunteer for the purpose, a chance to go into camps or forts with the regulars. This would, of necessity, be something that could only be done by voluntary act of the Militia; companies, battalions or regiments, and these, if necessary, provisional ones, should be permitted to volunteer for this, and liberal appropriations should be made for the Militia who do this.²²

V. THE CREATION OF A NEW NATIONAL FORCE.

There is a very general feeling among those who have considered carefully our military needs that we should have a national force which should serve as a reserve for the Army, and which should be organized and trained for this work.²³ Such a force might be drawn from the class of men who join the Militia, and its military duties might be performed at various times throughout the year; or it might be composed of men, similar to the best class of army recruits, who would do their military work in one continued period of from two to four weeks.

If the former plan were adopted the new force would practically come into competition with the Militia, and as this force has so large a share of public interest and sympathy, as well as so much merit, it would seem wise to give it a chance to develop as a national force before creating a new force, which was intended to take its place; such action should at least be delayed until the Militia has had an opportunity of showing how it will meet the efforts to increase its value to the nation by bringing it into closer relations with the Army and the central government. I have therefore suggested that the military duties of the new force should in time of Peace be performed in a continuous period of time, say four weeks in each year, during which time the men and officers should be paid. The force should differ from the Army only in having its military duties limited in time of Peace to a period of say four weeks in each year; this time might of course be shortened if experience should prove that it was too long, or if the proper authorities should so decide. Its terms of enlistment, time of active service (that is, number of years during which the men should do their active service,) and time in the Reserve, should be the same as that of the Army, and the men should have the same privileges in regard to purchasing discharges or changing residence. This force is of course a Reserve in itself, but, as it should be so organized that members of the force not on active duty could be ordered out when needed, thus giving the force its own Reserve, it seems advisable to give the force a distinctive name; for the reasons given below I would suggest that it be called the "Volunteers." To avoid, so far as possible, all the undesirable features of an independent force, I should in time of Peace make the Volunteers practically a part of the Army: the largest unit should be a battalion, and in most instances the formations should be companies or batteries, and the

highest rank should be Lieutenant-Colonel. These batteries, companies and battalions should be linked to and form part of the regiment in their district. Although organized as separate battalions, companies or batteries, the men when called out for their training, or in case of emergency, should be liable to do duty either in the army battalion or their own; that is to say, they could be trained, drilled and fought in their own battalions or companies, or the men could be incorporated, individually or by companies in the army battalion; when the Army formation was sufficiently strong, the individuality of the volunteer formation would be maintained, but when needed it could be used to strengthen the army battalion in any way that circumstances demanded.

The plan which I have suggested would necessitate having the *personnel* of this force more like that of the Army than that of the Militia. There are many workingmen in the country and the city whose occupations are such that, owing to periods of enforced idleness or slackness in their work, they can easily get away for from one to four weeks at certain times of the year. To these men the pay and perquisites, combined with a month in uniform at some pleasant place, would be sufficient inducements to enlist.

In a note I have given a list of the employments of the men in a militia company in England.²¹ This regiment comes from a country district, but there are many city regiments formed from a corresponding class of men; and England has found it possible to maintain a force similar to the one I have described, and 150,000 strong, composed of men taken from both city and country, who are able and willing to do one month's uninterrupted service. We have many men who would make excellent soldiers, who could give the time necessary for the annual training of this force. As this force in time of peace would be largely composed of men who would be attracted by the pay and perquisites, a rigid scrutiny should be exercised to exclude all men who do not have a good name and reputation in their district. It would be a very simple matter to require each recruit to furnish a letter from some one known in the district, setting forth the facts of the man's residence and his reputation for honesty, sobriety and faithful work. This would entail some extra work on the recruiting officers in the verification of the certificates of recruits, but this work would be well repaid if it resulted in having a force

composed of steady, reliable men ;²⁵ and if this force is to form the nucleus of a "citizen army" in time of a great war, it is of the utmost importance that it should stand well in the estimation of the people, and should be recognized as composed of men with good character.

The creation of such a force seems to be justified if not demanded by our action during the last war. The Nation did not use, to any extent, the existing State organizations, nor was the Army increased sufficiently to do the fighting ; the various States were called upon to supply new regiments called State Volunteers, which were organized into brigades, divisions, etc., and they maintained throughout the war their distinctive and independent organizations. The system which we then adopted would be open to certain objections even if the details of the organization of the force were carefully arranged in time of peace, but to leave all these matters until the time when soldiers must be sent to the front is worse than foolish.

The new force to which I have referred is intended to embody most of the merits of the old Volunteer force, while avoiding its admitted defects ; it is to be local in character, but national in organization. The nucleus of its formation is to exist at all times, and it is to have its recognized place in the military system of the country. It should, like the Volunteers in our last war, take the intermediate place between the Army and the Militia, and should be the nucleus of the "Citizen Army" upon which we should have to rely if we were engaged in a great war. It is for this reason that I have suggested calling it the "Volunteers."

This force would, like the Army, have its own reserve ; the men doing active service would form the First Volunteer Battalion of their regiment, and the Reserve, when called out, would raise the First Battalion to its war-strength, and form the Second Volunteer Battalion of the regiment.

Should the number of men, including Reserves in the Army and the Volunteers, be too large for one regiment, the surplus could at once begin forming the Second Regiment of the District.

The men, when on service, should be paid the same as the men in the Army, and the Reserves should receive a small semi-annual payment. Members of this force should be permitted to change their enlistment in the Volunteers to an army enlistment ;

and if an enlisted man in the Army is allowed to cancel his enlistment, there should be provision made for permitting him to go into the Volunteers.

The plan which I have outlined for the organization of this force and my suggestion in regard to the character of the men who should compose it, are the result of a very careful consideration of the various suggestions which have been made on the subject, but I can see so plainly the merit of other plans and the possible objections to the one I recommend that I have not the feeling of absolute conviction in regard to the correctness of my recommendations on this subject, which I have on all the other points discussed. I cannot but think that our first efforts with the new force should be tentative, and that experience would probably show in which direction it could be most successfully developed. I can see no objection to forming companies in different places with different classes of men and different periods of service, in order that the defects and merits of the different systems might be carefully studied. I do not favor the immediate organization on any extended scale of a force so similar to the Militia as to become, as it were, its rival; but I can see no objection to the organization, in some few places, of companies of this new national force, composed of men from the same class as the Militia, and doing about the same amount of duty; the existence of these companies might be of value as showing to the Militia what can be done in this way, and as stimulating it, by a wholesome and honest rivalry to avail itself of any opportunity to prepare itself to serve the Nation, and come into closer relations with the Army. At the same time some companies should be formed of the men and for the work which I have described above, for I am confident that many valuable men can thus be secured for a most serviceable Reserve for the Army.

The theory of our government is, that every man, irrespective of position or wealth, will do his military duty, but in a prosperous commercial country such as ours, this is impossible in practice. Nothing short of compulsory service will bring into the Army or into the ranks of a force which does any long continued military duty, all classes of our citizens. In Germany's last war, two of Bismarck's sons rode as privates in one of the cavalry charges at Mars la Tour; this is, of course, but one of a thousand incidents to show the class of men whom the German officers have to lead; but the system which does this, is one which we shall never adopt,

and we must recognize the fact, that in creating a large Reserve, we cannot rely, in the absence of an impending war, upon an abstract sense of duty, to fill the ranks with men who are sacrificing time, pleasure and money in the performance of their military duty. It seems, therefore, advisable, if not necessary, to take the bulk of this Reserve force from the class of men, who would find in the remuneration which they receive, something like an adequate compensation for their time and services.

There should be in the Volunteers an active and a waiting or retired list of officers. The active officers should be those who perform all the duties of their rank with the force whenever it is called out; the waiting or retired list should be made up of officers who had the proper qualifications, or had passed successfully the tests which I describe below, but who did not desire to perform the active duties of their rank in time of peace, but who were willing to accept a commission, and hold themselves subject to duty when the Government might call upon them.

Any army officers who wished to retire from active service should be given the preference for commissions in the Volunteers, and any such officer wishing a commission in this force should, subject to the approval of the President, be given it, the President being free to assign him to such command and with such rank as the interests of the Service demanded.

Militia officers should be permitted to apply for commissions in this force, either to go into active service or to be put upon the retired list, upon the following terms and conditions:

1. The National Government should permit the formation of classes for instruction to be composed of militia officers at one or more military posts in each military district. The class should be permitted to pass the designated time, say one month, at the garrison, fort or station selected for the purpose. Certain officers should be detailed to give the necessary instruction, and should be especially charged with noting the aptitude of the candidates, for instructing and drilling men, and discharging the practical duties of officers.

2. A militia officer, with the approval of his regimental commander, should be permitted to be attached to a company or regiment of the Army for a given time, say one month.

At the end of the time spent with a class of instruction, or with the regular forces, the militia officers should be examined. While the examination should, of necessity, cover some matters

of theoretic knowledge, it should, so far as possible, be made a test of the officer's ability to instruct, drill and lead his men. Not the least important part of the real examination should be the careful observance of the candidate in the daily performance of his work during the time he was with the troops. Militia officers who successfully passed these tests should be given national commissions in the Volunteers; those who wished to serve with this force would have to resign their State commissions, and would become active officers of Volunteers; those who preferred to retain their positions in the Militia would get their national commissions, but would be placed on the retired list of that force without pay or emoluments.

I believe that many militia officers would be desirous of holding such commissions, and would gladly give the time necessary to go through the prescribed course of work. A wholesome emulation between militia organizations would lead each regiment to wish for the largest possible number of officers who had successfully passed these tests. The officers would profit by the practical experience in the Army under the supervision of army officers, and the Government would have the advantage of having a list of those militia officers who had, under the supervision and criticism of army officers, been found qualified to receive a national commission. Militia officers might also be permitted to go for a certain specified time to Fort Monroe, Fort Riley or Fort Leavenworth. Under certain restrictions, perhaps, after having obtained a commission in the Volunteers, they might also be permitted to volunteer for active service in the West.

I would also recommend that, subject to the approval of the officer commanding the District, those who were not officers of the Militia should be permitted to join similar classes of instruction, *after* successfully passing a preliminary examination, the scope and character of which should be determined by the proper authorities. There are undoubtedly many persons in civil life who would make excellent officers, who will not enlist in the Militia for five years with the possibility of serving as privates most of the time. The plan which I have suggested would enable the Government to have the services of such of those as qualified themselves to discharge their duties as officers.

SPECIAL SERVICES IN THE MILITIA AND VOLUNTEERS.

The Militia is, by reason of its character and composition,

especially adapted to provide certain branches of service which are exceptionally valuable to a campaigning force. The practical advantage of a good signal service corps cannot be over-estimated. These corps now exist in some of the military organizations, but the great danger with an independent arm of the Service, such as this, is, that by lack of interest or enthusiasm, or by an unfortunate choice of officers it may fall below the proper standard of efficiency. In the plan of organization to be adopted for the Militia, there should be arrangements for a proper proportion of signal service men. The national government cannot, of course, issue orders to men in time of peace, but I would recommend that arrangements be made in each district for holding an annual examination by army signal officers of the militia signal corps; such examination would stimulate officers and men, would serve to indicate the character of the work done, and would point out any falling off in the efficiency of the Service. It would bring the corps into closer relations with the army signal service, and would insure to the Militia a corps which could be relied upon for practical service, and one capable of working, should it be necessary to do so, in connection with army signal corps. I am satisfied, although attendance upon such examination could not be made obligatory, that practically all the men in that branch of the Service would gladly undergo the test.

There is no country except America which has not incorporated cycling in its military system. We possess a large number of men schooled as cyclists who are eminently fitted to perform the duties which would be required of such a corps.²⁶ Our Militia, by reason of its character, seems to be particularly adapted for the formation of cycling sections, and I would, therefore, recommend that in the organization of the Militia, arrangements be made to have each brigade contain a certain number of cyclists, either organized as a distinct corps, or as cycling sections of infantry formations, the men being detailed from the various companies for this work.

We are entirely without any railway or transport corps, the importance of which in a country so vast as ours cannot be over-estimated. Valuable and efficient corps could easily be organized in the Militia. They should not only be familiar with all the details of railway management and transportation, but also with all the questions connected with the use of our railroads for transporting troops from one place to another, and the bearing

of different lines upon the defense of given places. In addition to these corps in the Militia, it might be advisable to have a staff organization in the Volunteers, who would be obliged, in addition to other duties, to study all these questions from the stand-point of the Nation's needs in time of danger.

The use of homing or carrier pigeons is now admitted to be of the greatest service to a campaigning or fighting force, and all the countries of Europe are training birds for use in case of war. Here again it is possible to add to our Militia this branch of Service, and to arrange in time of peace for the great advantages which would result from such a service in case of war.

The medical staff varies widely in efficiency in different States, and has never been properly developed in more than two or three of the States. This service should be improved in the Militia, and the Volunteers should be given their own medical staff and corps.

We are deficient in engineers and in submarine miners, in both of which services it would be possible to organize efficient corps in the Militia, and they should certainly be included in the organization of the Volunteers.

I have only referred to these various services without going into the details of their work or emphasizing their value and importance, because all these points are well understood. I merely wish to point out that the creation of the Volunteers and the organization of the Militia by Congress, make it possible for us to secure these services at small relative expense and in a uniform and satisfactory degree of efficiency; they do not exist, except in rare instances, at present, because the various militia organizations are regarded as purely State forces, do little practical work, and in most instances limit themselves to the development of infantry bodies. Consequently the State authorities do not look at the question of military organization from a sufficiently broad standpoint to see either the need or the value of these services; furthermore, if they did exist, there would be no common standard or test of efficiency, and they might easily degenerate into useless additions to the force. I have been told that in one State where the Militia is very well organized, that the formation of independent corps for special services has been discouraged, because it has been found that they often increased materially the number of men who held commissions without adding proportionately to the efficiency of the force. All this

would be changed under the system I have suggested. By inspections and examinations such as I have referred to elsewhere, the condition and efficiency of these corps would always be known; they would have common methods of work and a common standard of excellence, and any corps failing to attain this could be mustered out.

It is also desirable that certain changes should be made in the qualifications of militia staff officers. It might be well if the rule were adopted that all staff officers, except those in the Judge-Advocate's and the Medical Departments, should be required to obtain commissions in the Volunteers in the manner which I have described elsewhere.

It would also add materially to the strength and value of the Militia if it were given its own reserves. This, as in the Army, could be accomplished by making the enlistment cover a period of active service as well as a time during which the man would be in the Reserve and liable to be called out whenever needed either by the State or the National Government. A Reserve would be of great value to the force in time of War. I have spoken of organizing the Army, Volunteers and Militia as component parts of one force; while this seems to me of great importance, there is nothing in such a system which prevents our recognizing the different character of the forces, or even anticipating giving to them different kinds of duty. We should possess not only our organization for time of Peace, the principal feature of which should be that we can have, at the short notice with which modern wars are likely to begin, a sufficient number of men with proper training for our first and immediate needs, but our military system should be even more comprehensive and should include such modifications of our organization as might be made necessary by a war of great magnitude or long duration. In the event of such a war I do not think that the Militia, however closely associated with the Army, would be the force we should rely upon to do all or even the greatest part of the fighting; our Army would be increased somewhat and the Volunteers would be greatly augmented, many members of the Militia who desired active service joining this force as officers or otherwise; they would undoubtedly do this in large numbers and would thus seriously reduce the strength of the Militia regiments; the Reserves would enable the Militia to contribute, as it did in the last War, a large quota of fighting men, and still retain a suf-

ficient numerical strength of trained men to do such work as might be required of them. There would be great room for a well-organized militia to do important work in the rear of the fighting force; it could guard communications, garrison important places behind the fighting line, and serve as a training-school for officers and men who were to be sent to the front.²⁷

I have not made any special reference to the Artillery; no one can appreciate more clearly than I do the importance of this Arm, and our present lamentable deficiency in it. But the system of organization which I have suggested makes possible the proper development of this service. The report of the Artillery Council to which I have referred²⁸ points out so forcibly our needs that I have felt no additional words were needed.

VI. THE MANŒUVRES.

The subject of this paper embraces not only the "General question of how a National Reserve force should be organized," but also "how it should be trained by annual manœuvres, with the Regular Army or otherwise, for immediate service." In making the following suggestions for training the Reserve, I must again disclaim presenting an original plan. The only nation which has a force which resembles ours is England, whose Volunteers are in many respects similar to our Militia. The main features of the system which I suggest have been found to accomplish satisfactory results in that country and enabled them to put in the field in various parts of Great Britain for the manœuvres, last Easter, over 15,000 men belonging to a force, the members of which, like those of our Militia, are almost all engaged in some money-earning occupation, of whom Col. Routledge says about four-fifths "belong to what we are accustomed to call the laboring classes."²⁹ I should be the last to advocate anything which could be called mere imitation of any other country in the development of our military system, but if a plan which commends itself to our officers by reason of its own merits and its applicability to our conditions has been put into successful operation in another country under circumstances closely resembling those under which it would be applied here, it is for that very reason entitled to the most careful consideration.

As armies are maintained in time of peace in order that they may be ready for war, it follows as an axiom that they should, so far as possible, be trained in those duties which will have to be

performed when hostilities begin. Steadiness under fire and calmness when threatened with danger cannot be acquired by manœuvres with imaginary enemies, but almost every other virtue which a soldier should possess can be developed in time of peace ; and the administrative departments, now so necessary to the success of a fighting force, can be brought to a condition of practical efficiency.

The extent of this training is limited by the amount of money available and by the number of men who can give the time needed for such training, but its value to those who take part in the manœuvres is not dependent upon the number of men engaged. The following suggestions aim to present a method for securing this practical training, which can be employed whether the appropriation for the purpose be large or small, and whatever may be the size of the available force.

The Army and its reserve and the Volunteers and their reserve are always at the command of the military authorities, but as the Constitution only gives the National Government authority to call out the Militia "to execute the laws of the Union, suppress insurrections and repel invasions," it is plain that they cannot be ordered out for manœuvres, and it will therefore be necessary to depend upon the voluntary co-operation of the Militia in this work.

The States have the right to order out the Militia at any time, and this of course could be done for manœuvres, just as it is now done in many States for camp duty, but on account of the objections which I have stated elsewhere to the development of many independent authorities, I do not think it desirable that the manœuvres should be carried out under State control ; furthermore, the training obtained during the manœuvres will be of especial benefit to the force in making it better fitted to perform its duties to the Nation, and it is therefore peculiarly proper that the National Government should assume the control and expense of the manœuvres.

This, however, limits the number of militiamen who take part in the manœuvres to those who volunteer to do so, and this fact must be considered in determining how long the troops are to be out, the time of the year chosen for these exercises, and the character of the work to be done.

That the Militia would benefit from being associated in the discharge of certain duties with the Army, and from seeing the

Army do its work, does not admit of doubt.³⁰ The late Lieutenant-General of the Army in speaking of the fact, that portions of the two forces were on one occasion encamped near each other, said, "The intercourse between the National Guard troops and those of the Army proved to be of benefit to both, and afforded the State troops an opportunity to become more thoroughly conversant with army methods."

There are undoubtedly some points in which the Militia has comparatively little to learn from the Army, such as tactics and ceremonies, subjects which are much neglected in the Army; an officer who goes on a "scout" with a few men and possibly some friendly Indians, living with his command for weeks or months, as best he can, in the wild country through which his duty takes him, and ever on the lookout for hostile Indians, pays little attention to the niceties of drill tactics, which occupy so much time and thought on the Armory floor, and when he returns to his post the fact that there are not enough men within a hundred miles to form a battalion, makes practice in the tactics impossible; from such officers and their men, the Militia can, however, learn much that pertains to the practical daily life of the soldier, in camp, on the march, or in the presence of an enemy; and furthermore, what is perhaps quite as important, they will have a chance to see and value the effects of that spirit of discipline which pervades the Army, from the General to the private without which no body of men can properly be called soldiers.

It is not the Militia alone who will benefit by these manoeuvres. The command of a large body of men, and service in a large command, are important parts of an officer's practical training; but in our Army it is almost impossible for an officer to get this. At one of the recent State encampments an army officer was, by the courtesy of the militia officers, given the command of a battalion; this officer had had seven years' service, had had independent commands, and had served more than once against the Indians, and yet he had never before had so large a command, or been on duty with so many men and officers. All officers would agree with him that the experience of service with a large militia force was of great benefit, and that any plan which insured this experience to our officers would be of value to the Army.

The late Lieutenant-General of the Army, in his last Report, in speaking of the advantages of practice marches and field

camps, says: "With a more complete peace," consequent upon "the gradual cessation of Indian troubles, the experience formerly gained by active field duties, necessitated by movements against a hostile foe, can no longer be obtained, and these peace manœuvres become all the more necessary."

Joining the Militia and the Army for active duty is simplified and made more a matter of course if a system of organization is adopted, such as the one I have suggested, by which the two forces become recognized parts of our entire armed strength; but the possibility of having the manœuvres does not depend upon this. Without any change in the organization of either force, a call could be made upon the Militia to volunteer for this purpose. It should be a necessary condition of accepting these militiamen that they would consent to come under the authority of the National Government, and become subject to the orders of the officers assigned to command them.

The time for the manœuvres, their duration and the localities in which they should take place, are proper subjects for the officers commanding the districts to lay before the commanding officers of militia, in order that the arrangements may be such as to make possible the co-operation of as large a number as possible of the Militia. In England the Commander-in-Chief calls a meeting of the Volunteer colonels each year, at which they are requested to say where their men would prefer to go, how many men will come out, and for how long a time they will serve; the preference and convenience of the men is consulted in the arrangement of the plans. This is necessary there, and is equally so with us. When men are asked to put themselves under an authority which has no right or power to control them, except by the voluntary act of the men, it becomes necessary to make such arrangements that the desired number of men will consent to come out and submit themselves to this authority.

In order that the Militia should have a clear understanding of the general character of the work which they would have to do if they volunteered, the Secretary of War should, several months in advance of the time proposed for the manœuvres decide:

1. In what localities it is desired to have the manœuvres.
2. How much time they will occupy.
3. The general character of the operations which will be undertaken by the troops engaged, and

4. The amount of money per man which will be paid to militia organizations which send any men.

On the first two heads and even the third, the officer commanding the district might with advantage be instructed to consult the militia colonels in his district in order that it might be known in advance to what extent the decisions of these questions would affect the member of the Militia who would volunteer.

When these points had been settled, the army officers commanding the districts in which the proposed manœuvres were to take place, should send the information indicated above to the officer commanding each militia organization and should ask him for an estimate of the number of men and officers who would volunteer to take part.

On the return of these estimates, the authorities should determine what proportion of the estimated militia strength was to be employed in each locality, the desired number of regulars and volunteers being included in the total estimate of men to be employed.

The various bodies of troops should then be assigned to their proper places in the forces as arranged for the manœuvres, officers being detailed to their proper commands; when only a few men volunteered from any organization, provisional companies, battalions or regiments should be formed and assigned to their proper places.

The general character of the work to be done in each locality should be determined upon, and the officers commanding the forces engaged should be given the necessary orders to insure the performance of this work.

It is of course apparent that the widest possible range of experience and training is possible when troops take the field, and it is of the utmost necessity that the best judgment should be used in determining the character of the work to be done. In the first place, it should be clearly recognized that it is not the purpose of the manœuvres to subject the men to hardships or privation: It is true, that a campaigning force must be able to endure these, but a few days in every year or two are not sufficient time in which to train men so that they are in a condition to undergo all the privations of an actual campaign: The force should of course "rough it," but it should be clearly recognized that there are so many important things to be learned that the work

done must not be permitted to become a mere test of physical endurance. In the three subjects of marching, scouting and fighting there is more to be learned than our militia can acquire in the short time to which the manœuvres must be limited. The work should therefore be laid out in such a way that men and officers should have every chance to learn the practical details of these subjects and consequently should be kept reasonably fresh, as an exhausted force can do little good brain work; marching through a hostile or unknown country, the use of advance and rear guards, the duties of flankers, the means of communication between two marching columns by flankers and signal men, the proper way to secure information of the character of the country through which a force has to march, the way for scouts to find out whether the country is in the possession of an enemy, the use of skirmishers in the presence of an enemy, the choice of a defensive position or the decision as to how a defended position can be best attacked, the way to get troops into action over a rough country across fences or ditches or through woods, these are a few of the elementary questions connected with real warfare in which the Militia is practically ignorant, in which it can easily be instructed, and which are absolutely essential to anything like real efficiency. That the study of these questions possesses for men and officers an interest far greater than the dull routine of armory drill, no one will deny. The time and energy expended by the Militia on the various movements necessary to the brilliant performance of ceremonies should not be condemned, if the men are practiced in other and more important matters, but as a matter of fact there are officers and men in the Militia who pride themselves on their proficiency, whose knowledge and practice hardly goes beyond evolutions which would never be performed during a campaign.

A few days in the field will do more for officers and men in the direction I have indicated than months in the armory. I include men because it is now admitted that non-commissioned officers or privates must have an intelligent understanding of all the work which a fighting force has to do. In years past when the fighting was done by heavy masses of men, ignorant obedience and machine-like precision were all that was asked of rank and file. The change in the arms used from the slow firing-pieces to the machine-guns and magazine-rifles of the present day, has necessitated making the fighting-line thinner, and an intelligent understanding of his duty by a non-commissioned offi-

cer and his squad, or even by a single private, becomes a factor of great possible importance, and it is now necessary that the men should be trained to recognize their individual responsibility.³¹

Furthermore, our militia officers are not sufficiently familiar with the country over which they would have to lead their men in any engagement near their homes. I do not think I am exaggerating in saying that at the present moment the German General Staff has studied our maps more carefully and has more valuable knowledge of the topography of the country along our coast than our own militia officers; perhaps I might say, than some of our army officers. Not only should our militia officers possess at least a knowledge of the country in the vicinity of their stations, but they should be trained to acquire quickly a knowledge of any region of country; they should all know how to use maps, and a certain proportion should be thoroughly skilled in military sketching.

The quartermaster's and the commissary's departments and the medical service, all need practical experience, while transport trains and ammunition columns are unknown in the Militia.

I have referred elsewhere to bicycle and signal service corps, and homing or carrier pigeon service, all branches of service as full of interest as they are of value; their practical development is made possible by the manœuvres. I have, however, said enough to make it clear that well-planned and intelligently-conducted manœuvres would open new fields to the enthusiastic militiaman, and would add life and interest to a service which now occasionally approaches the level of dull monotony. The officer in command of the District would be the proper one to lay out the plan of the manœuvres in which his command were to be engaged. He would naturally arrange to have the work of such a character that it would train the force in those general matters which he thought important and at the same time familiarize them with the country, and give them, and especially the officers, a knowledge of the country over which they would have to fight an invader. Without attempting to go into details, I should like, for the purpose of illustration, to sketch the outlines of the arrangements which might be made under the plan I have suggested, to start the various forces on the work of the manœuvres. Although I speak of the "officer commanding the District," it is evident that the manœuvres can be carried out on the

same general principles, whether the districts are large or small, and even if no change is made in our present military divisions, I shall suppose that the manœuvres are to take place in the Spring. Although I speak of New York and its vicinity, the arrangements would be practically the same for San Francisco, Boston, or any of the lake or inland cities.

In the Autumn or early Winter preceding the manœuvres, the Secretary of War would notify the officer commanding the District, either before or after consultation with the militia officers, as might be thought best, (similar notices being issued in each District where manœuvres were to be held) that it was proposed to have manœuvres extending over the designated time, probably a Friday, Saturday and Monday; that the Government intended issuing a given sum per man, specifying it, to each militia organization, participating or represented during the entire time; that the operations would include a naval attack upon the New York Harbor forts, necessitating artillery garrisons for these forts, an engagement between hostile forces on Long Island in the territory embraced between Rockaway, Garden City, Whitestone and Hempstead Harbor, and also an engagement north of New York City.

Each commanding officer of Militia would be requested to report on or before a given time the number of men in his command, who would take part in such manœuvres, specifying the part which his command would prefer to take, whether as a garrison for the Harbor forts, in the campaign on Long Island, or in the country north of the City of New York; and also specifying how many additional men would come out for one or two days. On receipt of these returns, the Government would decide how many of those volunteering should be accepted for the specified service. The general plan of the manœuvres having been determined upon, the various militia units would be assigned to their proper places; provisional companies could be formed of those men who came in small numbers from different companies, and militia battalions or regiments could be given their proper places in Brigades; the command of provisional battalions or brigades could be given to such officers as might be selected for the purpose, it being perhaps desirable occasionally to have a regular and militia officer in command of opposing bodies of troops. It having been found that a sufficient number of the militia had volunteered, the officer in command of the District

would arrange the plan of operations more in detail. Arrangements would be made with the Navy for the attack on the Harbor forts and for co-operation in the manœuvres in such other respects as might be agreed upon, and quarters would be found in the forts for the Militia who would form the garrisons; the naval attack might include an attempt to land men under cover of the fleet and this attempt would be resisted and if possible prevented by those on shore. On Long Island the forces to be employed might be divided into invaders and defenders. It might be supposed that the invading force had been landed in two bodies, one at Rockaway Inlet, and the other at Glen Cove in the Sound. These two bodies would be instructed to effect a junction at or near Garden City to keep up communication by signalling with their boats, to act on the defensive and to be prepared, if the fleet was successful in capturing the harbor forts, to advance on Brooklyn. They would be instructed to capture all telegraph stations, to get possession of Jamaica, if possible, and if not to destroy the railway between Garden City and Brooklyn; the main bodies of this force would keep their communication with the boats well guarded and their signallers would keep in constant communication day and night with the fleets. The officer commanding the defenders would be supposed to have received information that hostile forces had landed at Glen Cove and Rockaway Inlet, with the probable intention of concentrating at Garden City or Jamaica, and advancing on Brooklyn, if their fleets had obtained command of New York Harbor; he would be directed to throw his forces hastily out from Brooklyn to prevent the junction of these forces and to capture them, if possible. His scouts would be required to find out the strength of the enemy and report on his position and movements.

These instructions having been issued to the commanding officers as much in advance of the manœuvres as might be thought best, they would be at liberty themselves or by their officers to study the ground and make their plans for the campaign. When the manœuvres began the invading forces would be placed at the designated places, the defending force would be assembled in Brooklyn and marched or sent by rail to their objective point; the commanding officers on both sides being left free to accomplish the results called for in their orders as best they could.

In the same way the forces which were to operate north of

New York City might be divided into hostile parties; the invading forces sent by rail to any given place and then marched in the direction of New York, to be met by the defending force, which would have marched out. Much latitude should be given the commanding officers in selecting their positions for the battle, which would be fought when the opposing forces met. The work of the troops engaged might be varied in many ways and any duties necessitating great physical endurance could be performed by men who volunteered for that special work.⁴² As an instance of what might be done to give a few men a chance to display strength and skill, the invaders might dispatch a body of picked men to blow up the Croton Aqueduct, and the defenders having learned of the plan, would send a force to prevent this and capture the detachment.

In each case there should be an umpire in chief whose decision on all questions should be final, and subordinate umpires should accompany each command; from their reports, and his own observations the umpire in chief should make up his final report. It would be the duty of these umpires to decide all questions connected with operations which could not be actually performed; for example, if a party were sent to destroy a line of railroad, it would be for the umpire to determine whether this had been accomplished or whether the line had been so guarded as to make this impossible. His decision would depend upon whether the party carrying the proper tools or the equivalent of dynamite had been in undisturbed possession of the road or bridge to be destroyed a sufficient time to have made its destruction possible. In the same way the issue of battles or skirmishes would be decided by these umpires, who would determine which side had won, when bodies of troops had been captured and the extent of the losses. These suggestions are merely offered as a sketch of the possibilities of such manœuvres, the value of which in many directions would be great to all engaged.

In a recent paper read before the Military Service Institution, Lieut. Wisser pointed out the need of a more careful study by our officers of minor tactics. He says: "I have asked some of the brightest and best officers of all arms what they know of Minor Tactics, the proper way of handling a battalion on the line of battle, of conducting a reconnoissance with cavalry, of occupying a position with a mixed command, and I have yet to meet the officer who felt that he was thoroughly familiar with

even the simplest duties. Nor will I acknowledge that even those who served in the War are as a result of that experience instructed in the *modern* system of Minor Tactics. This is largely owing to the fact, as Lieut. Wisser says, that "to-day the subaltern officer's ordinary military duty consists in marching in the line of file-closers or attending roll calls," and other officers have little opportunity for any practical application of the knowledge which they may possess on this important subject. He has pointed out how an understanding of this subject can be acquired by a few officers without the use of troops, and the "practice rides" which he suggests, and which are a regular part of the duty of Continental officers, should be introduced into the Army, the Volunteers and the Militia; but the actual work, such as I have suggested, would be a most valuable opportunity for the practical study of this subject. Officers and men would find many chances for increasing their knowledge and their interest in this and many other important military questions. Practice marches might be made or field camps established where for any reason extended manœuvres were undesirable. In short, every kind of work or duty which a force would be called upon to do in times of war, excepting actual fighting, could easily be introduced into these manœuvres. At the same time it is possible to avoid the hardships of an actual campaign, without materially diminishing the value of the experience. It can be determined in advance where the various bodies of troops are to be each night, and provisions can be made for billeting them in farm buildings and such other places in the country towns as could be secured for the purpose. If the commissary receives this information in advance, an abundance of food becomes a certainty. The selection of the ground for the campaign, and the adoption of the plan of the work, should in every instance be left largely to the officer in command of the military district; he is the officer who in time of war would commend the troops fighting in that locality, and he should have the privilege of arranging the manœuvres so as to give his command the training which he thinks most important for the work they would then be called upon to do; and he should be free to make his own plans for familiarizing his officers and men with the character of the country, its roads and its positions of strategic importance, a knowledge of which would so materially aid a fighting force. The German officers not only know their own country, but their General Staff know, with

wonderful exactness, the topography of the country of their enemies. In the Austrian campaign they knew the exact width of all the rivers which their forces had to bridge; and at the siege of Paris their artillery knew the elevation necessary to drop shells into forts which they could not see. Our army and militia officers would profit greatly by knowing more accurately than they do that portion of our country which they would be called upon to defend in case of attack.

No one denies the practical value of manœuvres, but their feasibility has been questioned.

1. On the ground of expense.
2. On account of getting the Militia to give the necessary time, and
3. On account of the obstacles in the way of uniting two forces which, like the Army and Militia, are differently organized and are under different authorities.

The manœuvres will undoubtedly be an expense to the Government; how large this expense will be, depends upon many questions, but chiefly upon the number of men engaged and the amount paid them.

I have no doubt that many militiamen would volunteer to take part in these manœuvres without pay, but it is to be hoped that if there is any intention of bringing the Militia into closer relation with the Army and the National Government, the Government will not accept their services without pay. In England the Government pays each volunteer organization thirty-five shillings for every man who is present for duty during the entire four days of the manœuvres. The volunteers provide their own quarters, rations, transportation, etc. It is a question for our authorities to decide whether they should pay a gross sum per man and let the Militia provide for themselves or pay less and supply quarters, rations and transport. The money question is here, as always, a serious one, but if the principle of short service followed by a time in the reserve is adopted for the Army, there will be so considerable a saving that the most rigid economist would be justified in favoring a suitable appropriation for the manœuvres. Whether the Militia will give the time necessary to make the manœuvres successful can only be determined by actual experiment. My own judgment and that of many militia officers who are well qualified to judge, with whom I have spoken is that they will readily make the necessary sacrifices if the work they are

to do is judiciously arranged. In this connection it should be borne in mind that much can be done in three or four days, and a large number of men can give this much time. The difficulty of uniting the two forces would be, to a great extent, overcome by the method of organization, which I have suggested by which the Militia would become a component and recognized part of our armed forces. But independently of this system, the two forces can be united by calling upon the Militia to volunteer for the manœuvres and by making the conditions under which they volunteer such that they can be put under such officers as the Government may designate. In time of war the National Government has the authority to assume exclusive and absolute control of the entire force, but in time of peace, it has not this power over the Militia and no system can be devised by which this force, composed of men in almost every walk and occupation of life, earning, in the great majority of cases, their daily bread by their daily work, can be ordered to long continued military duty; but the spirit which has always characterized this force is such, that its members will gladly make great personal sacrifices to avail themselves of any opportunity to increase their efficiency, and make their force competent to render the country the greatest possible service in time of need. The latest recruit cannot but see the advantages which would result to officers and men from operations such as I have suggested, and I confidently predict that the great majority of men and officers would avail themselves of the Government's permission to take part in such manœuvres.

I have not felt called upon to go into the question of amounts, but I would strongly urge that whether the sum which Congress may give for this purpose be large or small, thoroughness and completeness in the organization and equipment of the forces engaged should be desired rather than large numbers. The benefits would be infinitely greater to our military system if we took out five hundred men with a proper proportion of the various arms, sufficient ammunition columns and transport trains efficient quartermasters and commissariat departments, and well equipped medical staff than if we had out four times as many infantry entirely without other arms or the necessary field services. The reason for this is plain; the manœuvres are intended to train men and officers in the practical work which they will have to do in time of war, and that training is imperfect and incomplete which

does not properly develop our administrative services, and impress upon all officers the absolute necessity of having them in a state of efficiency when troops take the field ; fighting is only a part of the work which will have to be done in the face of an enemy, and even that is impossible if the service of the ammunition trains and of the commissary's department is not efficient ; furthermore, no force is in a condition to take the field without a certain proportion of field artillery, and this necessity which is not sufficiently understood by the Militia, should be emphasized by having the proper proportion with each force. I do not deny that a few infantry can benefit much from marching or fighting independently ; but I do insist that the value of manœuvres to the force at large and to our military system is vastly increased, if we have every force which takes the field properly and efficiently organized. I have referred to this at some length, because the trouble and expense which this would entail might be urged as objections ; but it is of great importance that the Militia should have a chance to learn how all this administrative work should be done, how many men and horses are needed for these special services, where and how they can be obtained, and to familiarize themselves with these and many other similar questions which are no less important to the efficiency of the force than the skillful marching and fighting of the men and officers. In these matters the presence of the Army can be of the utmost service to the development of the Militia or the Volunteers ; the Army can supply field artillery, ammunition columns, transport trains, and those other services which the Militia could not put in the field for a few days without great cost ; the details of a sufficient number of militia officers and men to these services with the army force in charge would give them the needed practical experience at the lowest possible cost.

We often hear that the Militia are not practical soldiers and we know that our officers have no opportunity to command large bodies of troops ; the manœuvres present a way for correcting these admitted defects, and among their other advantages they will give men and officers a knowledge of the country which will be of incalculable value if they are ever called upon to face an invader.

There is one feature of our present military organization to which I feel that I should refer before closing this paper, and that is the lack of any body of officers corresponding in general char-

acter to the German General Staff. I do not refer to the subject of a General Staff for the purpose of pointing out now the unquestioned advantage which the work of such a body of officers gives an army when actively engaged in war; but I wish to call attention to our complete lack of any recognized authority to study and report upon those theoretic questions of organization which are in the present day so vital to the healthy and efficient condition of an army. When the German General Staff reaches a conclusion on any military subject, the nation accepts their decision as final, because the people know that the most able and the best trained officers in the army have studied the subject in all its bearings and that their judgment of the needs of the army is founded upon a patriotic consideration of what the nation needs. I doubt if history can show an illustration of greater confidence in tried officials or a more striking instance of public recognition of the merit of a picked body of officers, than the action of the German people some months past when the Staff asked for an increase of the army and of the taxes necessary for this purpose. Bitterly as Bismarck is opposed by certain elements of the people and violent as are some of the opponents of his policy in the Reichstag, the proposition to add thousands of men to Germany's available force coupled with a request for \$80,000,000 to carry out the necessary changes, was carried by a unanimous vote.

England and America offer a striking contrast to this. In both of these countries, owing to the absence of any such recognized authority, any proposition for a change is generally by the appointment of a Commission. But it is the exception that this results in anything more tangible than the submission to Parliament or Congress of the valuable reports which after months of study and investigation these Commissions prepare.

With us, the artillery point out their needs, the infantry theirs, enthusiastic militiamen call attention to the defects of their force; but there is no consensus of opinion on these subjects, no treatment of these questions from the broad and comprehensive stand-point of the Nation's needs, and the ablest opinions on any subject have for the public no more weight or importance than is accorded them by the few individuals who take the trouble to study them.

In England, and with us, officers high in authority, often advocate the most opposite action on important military ques-

tions, and it has happened that the late Lieutenant-General of the Army and the Adjutant-General have differed diametrically in their recommendations to the Secretary of War on the same subject.

That this may some time be changed should be the hope of all interested in the welfare of the Service; but this defect in our present condition makes it especially important that all needed changes which we make should be in accordance with those principles of organization upon which we can base our entire military system, and that before we are drawn into discussions of the details, we should have reached a practically unanimous opinion in regard to the fundamental basis of the organization.

CONCLUSION.

To summarize briefly; I have pointed out the need of regarding all the military forces of the country for the purposes of organization, as a unit, and I have suggested that the Army, the Militia and the Volunteers should all be organized as component parts of our total armed strength.

I have endeavored to lay down certain broad principles which are applicable to our entire force, and which, if applied to the Army, Volunteers and Militia, will develop a thoroughly harmonious and well proportioned force; but it should be noticed that while all these principles can, and in my judgment should be applied to the forces, they are at the same time sufficiently independent to admit of the successful application to our military organization of any one or more of them which might meet with the approval of the proper authorities.

I have suggested a plan for greatly increasing in time of danger the numerical strength of the Army by calling to it men who have been trained in it, and who have served under the officers who will command them when they take the field. The principle of short service followed by a period in the Reserve would supply one of our greatest needs, in permitting us to maintain at any given time a small number of men under arms and yet have a large number available for addition to this force at a few days' notice. Notwithstanding the value that other forces may possess, it will be admitted by all that any addition to the strength of the Army is relatively of more value than a proportionate increase in the Volunteers or Militia.

I have recommended that we apply the territorial system to

our forces, and I have shown that it is necessary to the rapid and successful mobilization of the Reserves which we should have if the system of short service is adopted. These two changes, in addition to giving us the power of rapidly calling together a large body of men, would have the effect of attracting to the Army a much better class than now enlist, thus raising its tone and bringing it into closer relations with the people, and changing the present unfortunate popular conviction that the Army is largely composed of men who cannot succeed in any other occupation.

I have also pointed out a way to begin the important and necessary work of changing the present unsatisfactory organization of the Militia and making it a force capable of rendering valuable service to the Country, while at the same time retaining present regimental organization in regard to which the feeling in the force is very strong.

I have also suggested the creation of a new national force similar in its general character to the volunteer force used in our late war, which will serve as a nucleus for the great army upon which we must rely in any long-continued war.

In addition to this, I have pointed out how manœuvres can be so arranged as to bring all the forces into closer relations with each other, to give officers a chance to handle larger bodies of men than is now possible, to study practically minor tactics and other questions connected with campaigning, and to give the rank and file the experience so necessary to their efficiency in the daily routine of marching and camping.

If the principles of organization which I have recommended are adopted, we should be enabled to secure a National Reserve for military service adequate to our needs, and the Manœuvres would enable us to train them so that they could successfully perform the work which they might be called upon to do.

No great nation has so simple a military problem as America. We have no jealous or threatening neighbors. We have no inherited race quarrels which have been such potent factors in hastening war; we are by reason of our great numbers and vast territory absolutely free from all danger of a war of conquest. Our only need is that we should be in a condition to discuss international questions with foreign powers without having our greatest cities and their vast wealth and commercial interests absolutely at the mercy of those powers. While we can easily afford the money loss which the ransom or destruction of our

sea-coast cities would entail, we cannot afford to undergo such a needless humiliation. If neglecting all proper precautions, we should suffer disastrous defeat, and national pride should then tempt us to undertake what would really be a War of Revenge, we might possibly find that such an avowed purpose would array against us a combination which the most sanguine would not be pleased to encounter, and such a policy, even if successful, would entail an expense so enormous as far to exceed the cost of maintaining a proper and adequate system of defense. But if we offer no vulnerable point to possible enemies, any position which we may take in regard to international questions or any demands which we may make, will be carefully considered; and if our claims are disregarded, we shall then be in a position to determine calmly and deliberately what course of action we should adopt. If, as some people hope, this country is to exert upon the world the beneficent influence of a great people, raising their voice only for what is right and meeting other nations in such a spirit that the inevitable differences of opinion which may from time to time arise between the most friendly nations, are to be settled without bloodshed, that influence will be strengthened and widened, if we add to our admitted wish for peace the unquestioned fact that we can resist and punish any attacks which foreign nations in the excitement of some great controversy might be tempted to make upon us.

This paper has been written with the conviction and in the hope that the changes which it proposes will tend to secure these results.

Suaviter in modo fortiter in re.

NOTE.—For the Notes pertaining to this article see "Appendix" to this JOURNAL.

ON FIELD MANŒUVRES.

BY MAJOR EDWARD NASH.*

ROYAL ENGINEERS.

AT a time when the subject of Field Manœuvres engages attention in all States where any earnest desire to prepare the military strength of the nation to fulfill the sole object of its existence is observed, it is useful to survey the views of those practical soldiers who have made the instruction and education of troops a life-long study. I think that in making this survey one may distinguish two very distinct schools of thought, one of which is presided over by the Russian Dragomirov, the disciple of Suwarrow and Peter the Great, and the other what one may call, for convenience, though not in all honesty, the German school, which finds its living representative in Boguslawsky.

Dragomirov insists most strongly upon the *man* as the most important element in war, and the *heart* of the man as the most important part of his being. His point of view is therefore what may be called the psychological one. The feeling of fear, the sentiment of self-preservation, he believes to be the true stumbling-block in battle, and all his ideas of discipline and training turn upon the necessity of counteracting this sentiment. He looks to overcome it by inculcating a spirit of self-sacrifice, and by teaching a soldier good habits in peace, which, by routine, are to become ingrafted into his very nature. He therefore disclaims any idea of making manœuvres the picture of war; he will not have the shadow, but prefers the substance. The opposite school, represented by Boguslawsky, looks to the exterior physiognomy, the picture, before all else.

Dragomirow favors especially the idea of the "traversed attack," that is, the actual crossing of the hostile bodies, the one

* Major Nash is a valued Foreign Correspondent of the Military Service Institution.—[E.]

side passing through the other, followed by a return in the opposite direction. This is in order to accustom men and horses to the actual execution of, and resistance to, a charge. Nothing could be more unlike reality, but the reality of the picture is not claimed. Only the good habit acquired is looked to. In this system the idea of education predominates; in the system adopted by the other school it is the decorative effect, the panorama, which is sought for. Without victor and vanquished there can be no complete picture; therefore Boguslawsky rests much upon umpires who are to make decisions. Umpires are not a necessary part of the Russian's school, for a decision of the mimic combat is by no means necessary. Neither is retreat allowed, because this would be an immoral teaching, whilst a system which rests upon the fidelity of the picture cannot be complete without a retreat.

This is enough to expose the great difference of thought. The essence of the one system is so distinctly opposed to that of the other that we cannot help seeing that one is based on right principles and the other on wrong. The question is "what are manœuvres for?" Undoubtedly to prepare troops for actual war. But what does this preparation consist in? Education and instruction. Which of these two parts is of more importance? Surely education. For the result of battle does not depend upon whether men are instructed in drill and the use of the rifle chiefly, but rather upon the education of the heart which enables men to resist under the most trying circumstances. Who will say that victory does not always rest with that side which preserves longest its moral superiority? Who will dare to base the result upon physical losses alone? Who will dare to assert that the decision rests in the rifle or the bullet? It is the living projectile—man—who decides the issue; the decision lies in the hearts of the soldiers. It is by the power of one side to resist longer, to suffer more than the other, that victories are gained.

The published German rules for manœuvres contain detailed methods whereby reality may be imparted to the exercise, such as the forming of one detachment stronger than the other. Boguslawsky says "in order to avoid unreality it is necessary that the assailant should be much stronger than the defenders." And again, "in order to obtain a solution with equal forces it is necessary to represent a reinforcement to one side by means of bannerols, etc." It may well be asked what unreality there is in the defeat of a superior force by one numerically inferior? Are

we to teach men always in peace that they can only expect to triumph when in superior numbers? In war we must often advance without knowing whether the enemy is superior or not, and the best way to get beaten is to count the numbers of the adversary.

Is it necessary to have a decision, or is it necessary to have umpires to determine which side is to give way? Everyone who has taken part in Field Manœuvres knows what endless altercations the decisions of umpires lead to. No leader ever accepts an adverse decision, for he well knows that in war he would not give way in his present moral condition. And what if he has committed some tactical fault? Such a fault may on the field of battle lead to a brilliant success, and inversely the observation of all the rules of manœuvres which command a favorable decision may lead straight to disaster. To order a battery out of action because it is under infantry fire; to disallow a cavalry charge because the enemy is not yet sufficiently demoralized; to judge an infantry assault beaten because the enemy is in superior numbers at the assailed point;—all this teaches the very opposite of what you would ask troops to do in war. Why then teach men in peace the policy of circumspection and prudence when it is resolution in attack and obstinacy in defence which alone secures victory on the field of battle.

Boguslawsky says that an umpire must be careful to put aside his preferences and personal sympathies when pronouncing his verdict. This is easy to say and hard to do. The most impartial umpire, and the most competent, is not in a position to weigh all the elements which may give victory or defeat. Who can judge the inward feelings of men?

Certainly a *critique* at the end of the day is necessary, but this *critique* is made all the more easy when no decision of victory is demanded. The umpires or directors have only then to observe the tactical faults of that body to which they are respectively attached and are not hampered by the necessity of continually weighing chances. To observe and report is all their duty. If the exigencies of the manœuvres require the vacation of ground by one side, it is easy to order that side to the rear without judging it a defeated force.

The hard conventional rules adopted generally for manœuvres tend much to immoral teaching; they destroy the essential spirit of initiatives and make no allowance for the moral element,

which, in war, counts higher than anything else. We do not now precisely see a repetition of the eccentricities of that great leader who cried to his men on the Champ de Mars, "*Mes enfants, fléchissez sur les jambes, vous gravissez lu ce moment une hauteur,*" but we are still bound by conventionalities which are hardly above this level.

It is well to notice that the German regulations for manœuvres give no idea of the actual method of execution in that country. We see there the most unheard of extravagances. Guns rush forward with the advanced infantry lines; cavalry rides down unbroken infantry, prepared to receive them with a fire which would empty every saddle; infantry advance up to 400 metres from the enemy in position without firing a shot and with an utter disregard of ground. One may smile and observe that this is cheap heroism; one may laugh at such extravagances. But it is not the ordinary deeds which count for anything in war; it is these very same extravagances which win battles. The Germans know about what they want. They know that a man soon learns to take all advantage of cover when he is being shot at. Consequently we see in their regulations this significant sentence, a challenge to disorder: "*Under the effective fire of the enemy's musketry the infantry will take up the quick-step.*" The Germans are convinced of the overpowering force of habit; they take care to teach good habits only in peace. The education of the heart of soldiers I believe to be the true rôle of Field Manœuvres and the picture of very secondary importance.

REVISION OF THE TACTICAL GAITS PRESCRIBED FOR OUR CAVALRY.

By COLONEL R. P. HUGHES, U. S. A.,

INSPECTOR GENERAL.

SOME four years ago I began making tentative efforts towards getting satisfactory movements, at the trot and gallop, from some of the troops of cavalry I was then inspecting. My efforts were not successful. As a rule, the movements were lifeless and dragged badly. There was a total absence of that spirited movement, and evident resolution of purpose, which was so distinguishing a feature in our cavalry during the latter part of the War of the Rebellion. Many of the horses, and it was noticeable that they were the best cavalry horses, would not trot when such was the order, but would probably trot a few yards and then throw up their heads and jiggle, or take a high jumping motion which is not given a name in the list of gaits, but it is a sort of bastard lope.

When the order was given to gallop these horses would plunge and generally create more or less disorder and confusion in the ranks. Finally, when the order was given to "as foragers, charge" these horses settled down to work and showed that they were of the right material, and that they were simply spirited, free-moving horses, such as are most suitable for the cavalry service.

This state of things led me to look for the underlying cause.

I first satisfied myself by very careful practical demonstration, at the inspections of many troops of cavalry, that the fault could not be charged to the tactics prescribing gaits of too high a rate of speed. I then made some experiments with horses which had refused to trot in ranks, by detaching them, and having the trooper trot them off, at will, at their normal gaits. I soon be-

came satisfied, that, in a large majority of cases, the difficulty did not lie in the horses. I then tried some experiments by giving the horses a more rapid gait, and also giving greater freedom in line, by taking the guide *off* the *flank* of the platoon, or troop, and making the platoon leader the guide.

These experiments have convinced me that much of the trouble lies in the erroneous rates of speed, given to the various gaits, in our tactics. Our gaits at prescribed rates are so dragging that the spirited horse finds no soothing outlet, in muscular action, for his energies.

The great want of uniformity of speed in our platoon and troop guides may also be considered a source of trouble.

I also became convinced that the flank of the line was not the most judicious position for the guides. Placing the guide on the flank, where he cannot be seen by the men in the same line, inevitably leads to more or less *unnecessary* jostling of horses, waverings in the line, and variations in the gaits. Paragraph 477, of the Cavalry Tactics, attempts to palliate this defect by directing the guide to extend his arm to the front when he finds himself being thrown off his course. But, it is submitted, that this extending of the arm is only palliative, while we are in need of a corrective. This wavering of the line, and jostling of horses, is aggravated by the fact, that, not only do the guides of different troops move at different rates of speed at the same gaits, but the different guides of the *same* troop will differ very widely. In practical tests in this matter, when I had the troop trot two hundred and fifty yards with the guide on one flank, and return over the same course with the guide on the other flank, I have found the two guides make the difference between forty-five seconds and seventy-three seconds.

The first gait was entirely too fast for working purposes, but, rapid as it was, the horses moved with more harmony than they did at the slower gait. At the time I was under the impression that both cases were over the authorized line, i. e., that the first was too fast and the latter too slow; but, to my surprise I found by calculation that the latter was almost exactly our tactical gait. At the fast rate there were probably two horses loping. At the slow gait the trotting horse was the exception, as at least five in every six were going at a bastard lope or jiggle.

I have seen two troops belonging to the same garrison differ thirty-five seconds in time in trotting a distance of two hundred

and fifty yards (one doing it in 45" and the other in 80"). I do not hesitate to say that the order and tactical cohesion was best in the faster rate. The slower rate seemed to irritate the horses, by reason of their failure to find any gait which could be reconciled with such a rate of speed.

Having in this way satisfied myself that our tactical gaits were too slow for the comfort and proper training of such horses as we have in our cavalry, I undertook, by a careful course of experiments in many different troops of cavalry, to ascertain what was the rate of speed best adapted to the natural gaits of our horses.

In drawing our cavalry tactics the author seems to have contemplated that the rate of speed in the various gaits should vary in velocity to suit the adaptabilities of the different chevaline families from which the mounts of the different organizations were drawn. My observation is that we may disregard this refinement in tactics. I find no perceptible difference in speed in the horses of the majority of our cavalry regiments. The result of the *latitude* authorized in the tactics seems to have been pernicious, as the effect has been to license the guides in taking very great liberties in the rates of speed. There is no uniformity. In some troops the drill is energetic and full of life, but in most cases the movements drag very badly.

Our tactical rates of speed are as follows :

Walk, 110 yards per minute.

Trot, 205 to 234 yards per minute (220 mean).

Gallop, 264 to 322 yards per minute (293 mean).

First, let us take the mean of the two latter gaits, and compare our rate of speed with that of other armies :

	Walk, rate per minute.	Trot, rate per minute.	Gallop, rate per minute.
America.....	110	220	293
Austria.....	122	262	393
England.....	117	235	352
Germany.....	109	262	437
France.....	110 to 130	262	371
Italy.....	109	218	481 allongé. 364 440 allungato.

Now, tactically, we are the slowest people on horseback of all those mentioned, and I presume we are slower than many others, but I do not happen to have the books necessary to en-

able me to determine that fact. This could not be objected to if our cavalry horses made it so. But my investigation into this matter convinced me, beyond a reasonable doubt, that our horses are not the cause of our being behind everybody else, but that we are placed there by our tactics.

Further, our being slower in our motions than other people could not be objected to, *provided* we found compensation for our later arrival in having our troopers come up in better order, and with greater cohesion in the command. But according to my observation it seems that in our slowness there is a disturbing factor leading to disorder and confusion.

Of course it is not possible to secure the same regularity in the movements of cavalry than can be obtained in infantry; but in order that there may be as much uniformity as possible in cavalry commands, I think there should be some *fixed rate of speed established* for the different gaits, and that guides should be familiarized with these rates of speed, and required to adhere to them as nearly as possible on all drills, reviews, parades, etc.

As my investigation of this matter has only been one of the many subjects presented at general inspections, it has not been possible for me to make that exhaustive examination which is necessary to determine, with great nicety, just what is the best mean rate of speed for the kind of horses in our cavalry. But I have gone far enough into details and particulars to feel authorized in saying that our calculation of gaits must be entirely and distinctly our own. That none of the rates of speed laid down in the cavalry tactics of the foreign armies, mentioned above, can be accepted as the rate of speed most applicable to the cavalry horses of the United States.

I feel that I am fully justified, by the facts I have collated, in stating that the following rates of speed are very applicable in our cavalry, viz:

Walk, 117 yards per minute (mile in 15 minutes).

Trot, 250 yards per minute (mile in 7 minutes).

Gallop, 350 yards per minute (mile in 5 minutes).

Double Gallop, 440 yards per minute (mile in 4 minutes).

This makes the walk identical with the English; they trot considerable faster; and the gallop may be considered as identical. These figures have resulted from practical tests in widely segregated commands, with mounts from various sections of our extensive territory. I do not pretend to account for the greater

rapidity of the normal trotting gait of our horses over the gait laid down in the English tactics, but it has occurred to me that it might be the natural result of our national inclination to cultivate trotting stock.

The German walk is a trifle slower than our horses can do. Their trot is a little faster than I think our slowest horses can do, and their gallop is a *good deal faster* than our cavalry are now prepared for. This rapidity of gaits in the Prussian army may be the natural result of the efforts made by that Government to improve the quality and character of its cavalry horses. That Government had been spending much labor and money in this direction for a full century before the present rate of speed was adopted for the trot and gallop.

Austria and France are more nearly in accord in rates of speed than any of those named.

Italy comes more nearly to us in rate of speed than any of the others. She is with us in the walk and trot, but in taking the gallop, we find ourselves being left to the rear at the rate of seventy yards in the minute.

As the difference between the gallop of instruction, or drill, of 350 yards per minute, and the full career of a charge (600 to 700 yards per minute) is so great that confusion and a sort of breaking up of the line is apt to occur in the sudden great change of rate of speed, I am inclined to believe that it would be good tactics to adopt a "Double Gallop," with a rate of speed of, say, 440 yards to the minute (4 minutes to the mile), which should be the gait from which all charges are delivered.

After long consideration, and as the result of much study and observation, I recommend that a General Order be issued making modifications, something as follows, in our Cavalry Tactics :

I. Paragraph 1180, United States Cavalry Tactics, is modified to read as follows :

The gaits are the walk—the trot—the gallop—the double gallop—and the full career (or charge).

The walk is at the rate of.....114 yards per minute.

The trot is at the rate of.....250 yards per minute.

The gallop is at the rate of.....350 yards per minute.

The double gallop is at the rate of.....440 yards per minute.

The charge is at full speed.

II. Platoon leaders will hereafter be the guides as to direction and gait. The touch, however, will be to the centre in platoon formations, and the guidon in company formations, in line.

In advancing by troop front the command, Guide right (or left), will determine which platoon leader is charged with the direction and gait.

In a line composed of more than one troop, the guide of direction and gait is determined by the command. If the command is "right" (or left), it will be the right (or left) platoon leader. If the command be "centre," the platoon leader of the right centre troop will be the guide of direction and gait.

Platoon leaders will lose no time in familiarizing themselves with the different rates of speed and in educating their mounts to adapt themselves to them.

III. Hereafter there will be some movements executed at the trot, and at least two or three at a gallop in every drill in the school of the company (mounted). In battalion drills the trot will be the gait most generally employed, with the occasional employment of the walk and the gallop. The charge at full speed will only be employed upon rare occasions, as the double gallop will give the necessary speed for general instruction. As the gaits are intended for instruction in the open field, they will not be adhered to in the riding hall.

Special pains should be taken to have all commissioned officers present and in their proper places in all the battalion drills, in order that uniformity may be secured in the command.

In discussing this question, of platoon chiefs acting as guides, with various officers, an objection has been raised occasionally that "It would be confining on the platoon chiefs." This is true. But as the platoon chief is, in fact, the leader and director of his platoon, why should he not unite in himself all the functions necessary to enable him to conduct his platoon to the objective point with the maximum effect? It will undoubtedly be good instruction to accustom the men, as by second nature, to look habitually to their platoon leader as the source from which their decisions and resolutions must emanate.

The platoon chief would simply be kept in his proper place a little more rigidly, and the disciplinary effect of keeping him there might be for good; and giving the conducting of his platoon entirely into his hands is an increase of his powers over existing conditions. The present method designates the chief of the platoon as its leader, but gives the gait, direction, etc., into the keeping of some one else.

With the long range and quick fire of modern field artillery and the long range and intensity of fire of the infantry rifles, it would seem mandatory upon the cavalry that not a second of time should be lost through slowness of movement, in the preparatory evolutions for the actual attack, after being discovered by the enemy. Now every second of time taken up in preparatory movements, beyond what is absolutely necessary to get the command into position for the final attack in good order and cohesion, is lost. Furthermore, the necessity for the cavalryman to take his antagonist by surprise, or unprepared, and push home the attack before his enemy can prepare to meet the shock, has

been growing in importance ever since the failure of cavalry at Mollwitz in 1741. To do this our gaits must be as swift as our horses can make them, having due regard to good order and cohesion, and I submit that the gaits, as now drilled, do not meet this requirement and that the rates of speed recommended above are more nearly in accord with the necessities of the service of the present day.

I am told that General P. St. G. Cooke has published a system of cavalry tactics wherein the platoon chiefs are made the guides of their respective platoons, but I have not been able to procure a copy of his book.

To sum up: My conviction is that by the changes suggested we will secure the following advantages:

I. Less irritation of the horses, and its corollary, better order and greater cohesion in the command.

II. It would *necessitate* better equitation and consequently the men would be better entertained and more comfortable during instruction.

III. The rapidity of movement on drill would require increased dexterity and quicker decision of the officers, which is a very important element in instruction.

IV. It would be a step towards fitting our cavalry to meet the changed conditions resulting from the great improvements in modern fire-arms.

The English tactics place a non-commissioned officer out in front as squadron guide. I did not fail to examine the propriety of this course, but finally decided against it for two reasons.

1st. It seems to make the lieutenants, who are platoon leaders, subordinate, in some degree, to the non-commissioned guide, which is contrary to the genius of our tactics.

2d. The centralization of all the functions of gaits, direction, and guide, in the platoon leader, will enable him to use his skill in avoiding or overcoming obstacles in his line of march, upon his own initiative, which cannot be so if these duties are distributed.

The one point to which I wish to invite attention, upon which I am not prepared to express an opinion, is this: Should the troopers be formed boot to boot, if these rapid gaits are adopted?

I am inclined to believe that there should be sufficient interval between the troopers to prevent friction, but I do not feel at all convinced upon the subject.

Reprints and Translations.

LETTERS ON INFANTRY,*

By PRINCE KRAFT ZU HOHENLOHE INGELFINGEN.

Translated by MAJOR N. L. WALFORD, R.A.

I.

CONCERNING THE GOOD QUALITIES AND THE IMPERFECTIONS OF OUR INFANTRY.

ON reading of the exploits of the German infantry in the War of 1870-71, one comes to the conclusion, not only that it is the most perfect infantry which has yet been seen, but also that no more perfect infantry can be imagined. What though the Emperor Napoleon said, after the catastrophe of Sedan, that the German successes were due to the Prussian Ulans and the Prussian Artillery, while Bazaine expresses himself in the same sense in his "Episodes." The German cavalry undoubtedly blindfolded the eyes of the enemy, and secured for its own army the most perfect freedom of action. Again the artillery certainly was compelled often, and with success, to assume the rôle of its infantry, when our needle-guns were not as yet able to answer at long ranges to the French Chassepôt. But after all the infantry have always done the greater part of the work. Such deeds as the storming of the Geisseberg at Weissenburg, of the Rothe-Berg at Spicheren, of Fröschweiler at Wörth, the advance of the infantry almost into the line of the forts at Colombey-Nouilly, the stubbornness of the infantry against the three-fold numerical strength of the enemy at Vionville-Mars la Tour (where they finally retained possession of the field), and the storming of St. Privat, are heroic deeds, of which the honor rests with the infantry alone. This honor is increased ten-fold by the fact that the weapon of the German infantry was a poor one compared with that of the French, and had not nearly the same range as the latter. It might indeed be objected, that the German Staff had so arranged matters that at all these battles, ex-

* From the Proceedings Royal Artillery Institution (Woolwich.)

cept at Vionville-Mars la Tour, they had a numerical superiority at the decisive point. But nowhere was this superiority large enough to make up for the triple range of the enemy's weapons. For the French Chassepôt inflicted sensible losses on us at 2000 paces, while the sighting of the needle-gun did not permit of its being used with effect beyond 600 paces. Thus our infantry had to cross a space of 1400 paces, suffering ever increasing loss, before it could defend itself, while in all these battles it assumed the offensive against prepared, and often fortified positions of the enemy.

But in the later campaigns of the War the Germans very soon ceased to possess this numerical superiority. The army which was set in movement against Châlons, and whose operations ended with the victory of Sedan, was, even at that date, only 25,000 men stronger than the force (including that of Vinoy,) which MacMahon commanded; and when the investment of Paris had begun and fresh improvised armies were arising all around, the Germans were as a rule obliged to engage them with a strength from one-half to one-third of that of the enemy. Thus Prince Frederic Charles in the beginning of January moved with 58,097 infantry, and 16,360 horses (having with artillery and pioneers a little over 80,000 combatants), against Chanzy, whose army was estimated at 250,000 men. If the situation of the Germans in France at the beginning of January, 1871, were placed as a theoretical problem before a competent military critic, who had no knowledge of the War of 1870-71, but had been informed of the relative numbers of the combatants, and also that the weapon of the French infantry had three times the range of that of the German, he would consider it as simple madness to attempt to continue the siege of Paris, and to hold at bay the enormous relieving armies. But nevertheless this was done, and with the greatest success, and was not madness at all. The victories, which the German troops won everywhere, forced from our great taciturn strategist the exclamation: "What brave troops! Send them where you will, they are always victorious!" Even if it be taken into consideration that almost all the enemy's troops were newly raised, and had not yet learnt to shoot well, yet we on the other hand know from the experience, which we have gained from many experiments and much practice with long-range arms, that at the very long distances, up to 1600 meters, or 2000 paces, there is not much difference in the percentage of hits of good and bad shots, so long as the sight is properly raised; trained men cannot reckon on a large percentage at such long ranges. The full development of the shooting of single marksmen does not gain its entire value until the time of the decisive fight, when they can aim at individual men of the enemy, that is to say at 450 or 550 yards or less. Now every man of the huge masses of newly-raised infantry of the enemy had a long-range rifle, and with it threw bullets into our ranks; our infantry had need then of almost as much energy to hold their ground, and even to advance, under the long-range fire of these double and triple masses, as if this fire had been delivered by trained marksmen.

The more the details of the actions of this War are studied, the greater will be our admiration of the deeds of our infantry, though this admiration cannot excel that which was felt by those who witnessed them at the time.

Thus the question presents itself: "In what did the superiority of our infantry over that of the French consist?" For we cannot with certainty assert that a German is by nature braver than a Frenchman. The peculiarities of character of the two nations certainly differ, but the French have ever been held to be brave men, and their superiority over the Germans in making use of the character of the ground has been always from long ago acknowledged. Napoleon I. showed of what grand deeds the French soldier is capable; Sebastopol and Solferino had obtained for the French Army of the second half of our century the reputation of invincibility, and all those who, in 1870, were engaged against the old French Army, before it disappeared from the scene, learnt to feel how well and stoutly they fought.

This question was asked everywhere; and after our last war missions from every army streamed into Germany, to study our organization and to search for the causes of this superiority.

It would have been most natural, if our infantry had believed itself to be at the zenith of all perfection and had held fixedly to its organization.

But, on the contrary, we saw with astonishment that our infantry felt the necessity of improving itself in all directions. They were not contented with demanding an arm, which should possess every technical improvement, but they also attacked the existing regulations, as being no longer appropriate. The most varied proposals were made. Who does not remember the numerous, some marvelous, but most of them very good, formations for action, which were tried experimentally on the Tempelhof plain near Berlin.

The authorities also shared the opinion as to the necessity for changes in the regulations; a committee was assembled to revise the regulations, and on the 1st of March, 1876, appeared a revision of the infantry field-exercise of 1847, as a new edition, containing the changes adopted up to the 1st of March, 1876. Wonderful! It is felt necessary, after such unheard of successes, to change the principles of tactics! Involuntarily the question is asked: "What was wrong? Why these changes? What has happened?"

If we look at the statistical pages of the official account of the War, and compare certain figures, we shall find: "The Guard-Corps lost in the battle of St. Privat 307 officers, 7923 men and 420 horses, and at Sedan 25 officers, 424 men, and 190 horses; and yet had certainly no smaller share in the success of the latter battle than it had in that of the former.

The III. army-corps lost in the battle of Vionville-Mars la Tour 310 officers, 6641 men, and 677 horses, while the whole army of Prince Frederic Charles, four army-corps strong (of which the III. was one), and including several cavalry divisions, lost from the 4th to the 31st of January, 1871, in almost daily actions, among which was the three days' battle of Le Mans, 229 officers, 3721 men, and 426 horses, about one-half of the loss of the 3d corps at Vionville. The X. army-corps, which took an important part in these battles and actions, lost at Vionville-Mars la Tour 202 officers, 4945 men, and 365 horses, or more than the whole losses of the II. army in the whole of the month of January, 1871."

I do not wish to fatigue you with figures, or else I am in a position to prove the same fact with reference to every body of troops, namely, that they suffered colossal losses in the first encounters with the enemy, and later on obtained equally important results with smaller proportional loss.

The simple, incontestable and logical conclusion is, that some faults must have been committed in the earlier actions, which led to unnecessary losses, and which were at a later date avoided, after that the consequences of them had been painfully realized. These faults were due to no particular individuals, and entail no reproach to any one person, for they were universal and common to all; they were present in the system and in the principles followed; thence sprang after the War the universal feeling of the need for a change in the principles and also the numerous proposals made as to the form of the change.

It is impossible to deny that we were surprised by the long range of the Chassepôt, and at first everywhere marched, without foreboding, in close columns into the zone of this fire, in a real belief that we had plenty of time before we need break up into smaller units. This we naturally did not do in the next action. But this was not the only cause of our heavy losses in the earlier combats, losses which we were able to lessen in the later battles.

We, in addition, adopted formations for fighting in which our loss was less, leaving out of the question the fact that we avoided by reason of the universal and general familiarity with War many losses which novices must necessarily incur.

After the first great battles, with their excessive losses, new formations for fight were adopted and practised. These, based as they were on sad experience, withstood practical proof. I remember a very remarkable example of this. During an attack on a village, at a late period of the War, two regiments occupied that part of the edge of the village which had been allotted to them almost without loss, while two others again suffered enormous loss. The reason was that the two last-mentioned regiments were commanded by officers who had been wounded at St. Privat and having rejoined the force only on the day before this action, had not yet taken any part in the practice of the new formations. They fought in the old style, as they had been taught, in company-columns, and again suffered colossal losses. Both these brave men were among the killed.

But the habit of War, the being "*aguerri*," also diminishes the losses. Anyone who does not know practically what this means imagines (at least this was my case), that the habit of War is synonymous with hardening, and with indifference to all the toils and dangers of War. It is altogether the contrary! Men who, living in a certain amount of ease, comfort and effeminacy, have arrived at the age of 20, 30, 40 or 50 years, cannot in a few months so harden themselves that they can give all this up and expose themselves to cold, etc., without danger to their health and life. The habit of War consists in learning to procure for one's self, without increasing one's baggage to a degree which could not be permitted, that which is absolutely necessary, considering one's rank, station and habit of life, that is to say necessities which have grown to be so in one's earlier days; in

guarding oneself as much as possible from the effects of bad weather; and in avoiding in action all loss which is not absolutely called for by the object of the fight or by honor. This is even a duty. For the man who allows himself to be killed out of carelessness or bravado, when his death is unnecessary, does a wrong to his fatherland, which he thus uselessly deprives of a soldier.

Again we find, if we carefully compare the action of our infantry at the beginning of, and at the later periods of, the campaign, certain customs and habits which led to great loss and which were later on abandoned. These habits and customs, which are the result of a long Peace, will always take root again, if attention be not constantly drawn to the fact that things cannot go on so on active service.

It is well worth the trouble to search out, down to the smallest detail, what constituted these faults, which were committed, and were later on avoided, and as to what were the good qualities of our infantry, which, in spite of these faults and in spite of the enormously superior arm of the enemy, secured such grand results.

In making this search I shall not be able to refrain, from here and there, expressing a wish that this or the other might be improved. You will perhaps find it presumptuous that I, a gunner by profession, should criticize so excellent an infantry and dare to offer it advice. But criticism of, and advice to, infantry has been during seven years my duty as commanding a division. Moreover, in the first year of my command I industriously attended the recruit's drill; I was annually present at all inspections of recruits of an entire brigade, at the company-training of at least three regiments, and at the battalion-training of the whole division. I can thus, assisted by what I have seen in War (and including battles and sieges, I have been on sixty different days under the fire of the enemy), form a confident judgment with regard to infantry, and one the more impartial and the more unbiassed that it cannot be clouded by old habits. Far be it from me to undervalue tradition. Tradition is founded on old experiences, but he who follows the tradition knows nothing of these experiences. The great mass of people continue to do what they have always done, and ordinary men follow gladly the dear track of habit. Since, however, the experiences have been forgotten which formed the basis for the tradition which everyone follows, he who breaks with the tradition is in danger of destroying one based on good grounds, and may later on have to renew the old experiences in some unpleasant manner, and then to recall the old tradition, if there is yet time. For many things it will then be too late, especially for such as have to do with discipline. And when the discipline of an infantry is slackened, then, alas! good-bye to all great successes! I can therefore only recognize the deep wisdom with which those in high authority interfere only very slowly and gradually with whatever is rendered sacred by custom.

But there exist traditions which arise from the experiences of a time when we fought with quite other tactics. Line-tactics, in which soldiers were used only as machines, in which the infantryman was only food for powder, in which a private was more afraid of a blow with a stick than

he was of a bullet, these tactics must beget customs and habits, which can in these days bear no good fruit. And yet, because that time was full of glory, we still have, at least in a part of the Army, not perhaps regulations, but traditions, with which we might easily dispense.

Again, traditions grow out of the conditions which obtain in Peace when to work up for inspections and manœuvres is regarded as the supreme object of effort. This ought not to be, but it is so, and finds its origin deep in human nature. The man who is the very best soldier in the field, if in Peace he is constantly getting into trouble, must arouse in his superiors a suspicion that he has fallen from his former efficiency, and is no longer what he was. He also must, therefore, if he wishes to continue to serve, work up for inspection, etc. Such traditions we ought to fight against with all our might; we must not allow them to spring up, and when we come across them must throw them utterly aside, so that at inspections we may demand before all other things only that which is truly useful; but that must be rigid, exact, as rigid and exact as possible. It is also the duty of Inspectors to so direct their inspections that it may be impossible merely to "work up" for them.

I will now relate to you, as an example, one single tradition, which I came across when I commanded a regiment. I discovered, when I saw the recruits drilling in ragged clothing, that the batteries drilled their recruits in the winter in tunics and trousers which had been condemned and had been handed over to them as material for repairs. I forbade this by a regimental order. A captain of a battery, who had been long on the most intimate terms with me, said to me confidentially in private: "You have given me an order which I shall oppose; if I obey it and the other captains do not, I shall wear out my clothing and they will keep theirs new; then at the inspection I shall be blamed and they will be praised. We shall all therefore, when you are not there to see, drill our recruits in condemned clothing." "What will you do," said I, "if I have the clothing unpicked?" "Then we shall tell the company-tailors to make them up again." "But suppose," said I, "that I give you only half trousers and half tunics?" After thinking a moment he said, "We should be done there."

This was done. From that time when the batteries wanted to condemn 10 tunics and 10 pairs of trousers as material for repairs, they had to return these articles into store, and then receive from the quartermaster one 20 right legs of trousers and 20 right halves of tunics, another the corresponding left arms and legs. The appearance of the regiment was thus much improved.

You will perhaps laugh at such details. But the grandest and the most beautiful building is composed of comparatively small and unimportant stones, and falls together to the ground if these little stones are not worked and joined with proper care.

In my proposed examination into the good qualities and the failings of our infantry, I shall begin quite from the bottom, from the very smallest stones. If this is likely to weary you, then withdraw your request that I should write to you on my opinion of the infantry, and for my part I will cease to write.

II.

MARCHING AND GYMNASTIC EXERCISES.

As you say that you will not be wearied by my examination into details, I will continue my letters. But in order not to try your patience too much at once, I will begin by telling you a tale of an episode in my life. In the summer of 1864 I received command of a regiment. In the autumn my first recruits arrived. The whole barracks were soon full of such figures as would make you die of laughter, such that the most exaggerated caricatures of the* "*Fliegende Blätter*" would give but a faint idea of them. The awkward fellows, whose neglected carriage made them look like a set of ill-made images, tried hard but in vain to stand straight; some broad-shouldered yokels still wore their peasants' clothes, while tunics to fit them were being made, and tumbled about as they fruitlessly tried to master the balance step; some with exceptionally large heads, which none of the forage caps in store would fit, still wore, as the cap-maker had not finished his task, the shabby tall hats in which they arrived; these occasionally fell off and rolled across the barrack square; the whole motley company blundered together over their positions, facings and wheelings.

In the same barracks were quartered two companies of infantry of the Alexander regiment of the Guard. During the first week after the arrival of the recruits not a single man of this regiment was to be seen in the barrack square. At the end of the week I saw the first of the infantry recruits, and then only a very small squad, drilling in the square. They already marched so well, that I thought they were a detachment of the men of the previous year. But on asking Captain von W., who commanded the company, he told me that they were recruits. I expressed my astonishment. He told me quite openly that he was no less astonished that my batteries began to drill their recruits on the very first day, before even they had got their clothing; he allowed no man to begin to drill, unless he could drill. This seemed to me almost as if no one was allowed to go into the water before he could swim. But the result spoke so strongly in favor of Captain von W.'s plan, that at my request he informed me as to his principle.

He explained to me that every man of the lower classes uses only one set of muscles in his ordinary work; the shoemaker uses one set, the tailor another, the woodcutter another, and the agricultural laborer another; the muscles which are least used tend to grow feeble from disuse, and this is why newly-joined recruits (in nine cases out of ten) find it hard, and almost impossible, either to stand or to walk straight. They may be compelled to do so, but not without pain, which not unfrequently increases into cramp of the muscles, and this, in combination with all the new and unaccustomed things which the recruit finds in his new position, in combination also with home-sickness, leads to despondency and not rarely to insubordination, crime, and even suicide. For this reason it has become a tradition in the infantry of the Guard to instruct the recruits first of all in every kind of gymnastic exercises, which are carried on in canvas suits in the

* The Bavarian "*Punch*." N.L.W.

barrack room, and which advance very gradually and without effort from the easy to the more difficult, until they at length have command over all their muscles. Since these exercises are tiring, they are not carried on for too long together, but are varied by instruction as to their new position, by showing them their arms, etc., and especially in encouraging them to ask questions, by awaking their curiosity, in order that they may gain confidence in their new position and in their superiors. The results of these exercises are soon evident in the development of the neglected muscles, which shows itself by a natural and more upright bearing and by a regular step. When this result has been obtained, they then for the first time receive their uniforms, which the tailor has been fitting in the meanwhile, and commence their drill. Each man is, according to his progress, posted from time to time to the drill-squad.

I asked him whether the infantry of the Guard had any written instructions with regard to this practice, which he could lend me. The Captain answered that all this was simply a tradition which had gradually grown up, but that he would ask his officer who was in charge of the recruits to write it out for me; it would be very excellent practice for him, and I should have it after he had himself corrected it. He did so; but since there were many things in it peculiar to the infantry, I asked two of the captains of my batteries to work it out into a regulation fitted for the artillery. I found that these two officers agreed with me as to its value, but they were in the minority, for most of the officers preferred to go on in the old style, saying that this was all very well for the infantry, but that artillery had no time for such trifles.

After this system had been worked out, I made it a regulation for my regiment. At the next spring foot parade, which then always took place, the King looked at the regiment with his eagle eye, which took everything in, and said; "At last I see men well set up; I have always been told that the artillery could not pay attention to this, on account of their special work, but I now see that it can very well be done." The march of the men was also freer and unconstrained than it had been before. And, with all that, the soldiers had been less tormented than in previous years.

This success encouraged me to study yet more closely, so far as my special duty with the artillery permitted, the administration of the detail of training, as it has developed with time among the infantry of the Guard. I found such care for the education, training, instruction, and health of each individual man as could in few families be improved, while it was far greater than any man of the lower classes of the people would ever find in his own family. The maintenance of discipline was brought into careful connection with instruction in drill, and all exercises, including the gymnastics, used to increase both health and discipline, while the natural tendencies of each individual man were most conscientiously taken into account.

In this manner the recruit quickly learns to subordinate his muscles to his will. At the same time he learns also to gradually submit his will to the word of command. In order to secure this it is only necessary to direct that the exercises, even the easiest, shall not be carried out except by the word of command of the instructor. The man being thus accus-

tomed at the word; "arms to the rear!" "arms to the front!" lift your heels!" "bend your knees!" etc., to make the required movements, the necessary muscles act later on unconsciously at the word of command, just as the human will compels the members to move, while the man himself does not know that his will first affects the brain, and that from this the order travels by a roundabout way through the nerves to the muscles. The greatest care must be taken that the recruit is not roughly spoken to or frightened. If the instructors (officers or N. C. officers), are gentle, the recruit will soon gain confidence. Together with sufficient and good food, living in barracks of which the sanitation is medically cared for, and in cleanliness such as is quite unusual in most lower class families, the recruit has sufficient exercise of a nature to develop his body, a regular life, and plenty of sleep; in short, he enjoys such entire welfare, that he feels how fortunate is his lot, and blindly obeys whatever order his superior may give. Thus is developed the electrifying power of the word of command. That which in former days was begotten of the fear of the stick, is now born of trust, with this difference that its effect is more lasting. Since when in former times the fear of the stick vanished, discipline vanished also. Desertions are more rare in these days.

Especial care is necessary with regard to the connection between the exercises and disciplinary punishment. No recruit, up to the day when he joins the company for duty, that is to say until he is considered to have learnt his elementary drills, should ever be punished for faults at drill. During the 10 or 12 weeks of the recruits' drill no recruit, however awkward he may be, should ever be sent to extra drill or to punishment drill; for the day's work of the recruit is so measured out, that he has no spare time, his hours being divided between drills, exercises, instruction, sleep, eating, etc., as is best for the man's health. More drill would so tire him that his health might suffer in consequence. If there are men (and there always are) who join in such a low condition of mental and bodily development, that they cannot keep up with the others, then the more advanced may be dismissed from their drill earlier than the allotted time. The Captain is generally called upon for an explanation whenever he punishes a recruit during the period of his instruction, whether it be with a minor punishment or with arrest. Such a punishment is not generally given for a failure at drill or for awkwardness, since orders are given that recruits are to be treated with forbearance and patience, even when there is reason to believe that there is some want of will to do right. A recruit is not punished unless there is absolute proof that the fault was intentionally committed, or in case of such faults as are not allowed by law to go unpunished. The characters of the men vary very much, and there certainly are some who are ill-conditioned, who resist every order and all kinds of obedience, and find pleasure in crime and disorder. These are not however so numerous as is believed. But if it be once taken for granted that want of will exists, when in truth it is only want of intelligence and awkwardness, true ill-will is easily produced. It is thus better to have too much patience rather than too little.

When certain companies have acquired especial skill in the systematic

training of their men, and when they have had luck in the recruits posted to them, so that they by chance have not received a single worthless individual, it has happened that they have in this manner created an excellent discipline, and have not found it necessary to give the punishment of arrest during a year or eighteen months. And these companies are moreover the best in drill, discipline, and order.

This systematic training of the infantry soldier, and the care given to each individual man, even in his musketry course and in his work in the open country after he has finished his drill as a recruit, is one of the principal causes of our grand success in the last great war. The soldier endured all hardships, not from fear of punishment, but through confidence in his officers; he looked upon his toil as something unavoidable, as his fate, for he knew that if it had been possible he would have been spared it; he followed his officer in battle out of sheer trust; he was not discouraged even when he found the enemy in superior strength; he never suffered from panic, for he knew the value of mutual support and held to it, not because he was obliged, but from love for his regiment, in which everything had always gone well with him.

At a time when the soldier is supplied with an accurate fire-arm, and when the well-aimed fire of individual men must have more result than ill-aimed volleys; when the soldier, in order to fire well and with good effect, must lie comfortably on the ground instead of standing in a close crowded line; when he is, moreover, no longer a mere portion of a stiff machine, since each man can use his weapon with intelligence; when the infantry have ceased to be only food for powder, and have become a combination of single units working independently, at such a time the careful training of the individual soldier must decide the issue of battle.

But the task which, year by year, falls to the instructors of recruits is a difficult one. The greater proportion of the recruits come to the regiment raw in every respect, bodily, morally and mentally; no inconsiderable number of them have already been in prison. I have said above that the recruit is as a rule neither good or bad; the greater part of our nation is, at the age of 20 years, morally and intellectually, at the standard of a child of educated parents at 10 years old. There are even some individuals who are beneath this. I have had recruits who found great difficulty in pronouncing the number 34. I asked one of these to count. His scale of numbers went up to 11; he had heard of 13 and 17, but he did not know what they meant. This was a German; the Slavs of our fatherland are still more difficult to educate, since they do not understand German. They are further accustomed to an almost incredible amount of roughness in their intercourse with their parents and associates. I remember a recruit who could only speak Polish, of whom I as a Lieutenant had to undertake the training, and who did not understand a single word that I said, and stood staring vacantly before him. I told another of the recruits, who could speak German and Polish, to translate what I was saying. This fellow went up to him and gave him at once a tremendous box on the ears. When I reproved him for this, he met me with the startling argument; "Oh, you must let me do it, Lieutenant, he understands much better now." The box

on the ear in their society answered the same purpose as "Do you hear?" does in Berlin, or as the touch on the shoulder which many men use to draw attention to their words. What patience is required to make such men understand all that belongs to their duty in the field, to order, and to discipline, without even once knocking them down, he only can know whose forbearance has been thus put to a practical test. If sometimes an excitable and eager N.C. officer or lieutenant loses his patience, and has to answer before an inexorable court-martial for some blow given by him, looking at things from the point of view of human nature one can only pity him. When I therefore read, either in the Press, or in the reports of the Landtag or Reichstag, similar isolated cases angrily quoted as examples of a universal and overbearing military despotism, I cannot help wishing that each of those who so speak, write or vote, might be compelled by law to serve first for twelve years as an officer or N.C. officer.

From the moral point of view also many recruits are as backward as a child of ten years old. Among many of them no trace can be found of the feeling of duty, of religious conscience, of patriotism or of honor, while there is a proportionately small percentage of them who have any idea of good or evil. The great mass only know good from evil from the fact that the latter is punished. "I will not do this or that, because if I do I shall be put in prison or in the House of Correction." Many recruits hear first of duty, honor or patriotism from their instructor after they have joined the army. Many of them, even from parts of the country where German is spoken, know nothing of the history of their fatherland. There is a sort of figure of speech which we use when some one has said something which everybody knows; "Yes, old Fritz is dead." By means of this I discovered that many of my men had never heard of Frederick the Great. I asked one of them once, and he answered; "Yes, I heard that he had died yesterday."

It is the more difficult to train such men as they are mixed with others educated to a higher moral and mental standard, and these more advanced and cultured persons must be trained in quite another manner. It is only wonderful that the patience of the instructor of recruits does not fail him under this labor of Sisyphus. The brilliant saying of one of our most talented men; "Our victories were won by the German schoolmaster;" is only partially true. They might more justly be said to have been won by our N. C. officers; but they are instructed by their officer, and he by his superiors, while the most advanced among cultured men are trained by professors and by learned soldiers. When on the 29th of January, 1871, the forts of Paris were surrendered to us, I happened to be going on duty from Versailles to St. Denis. I followed the Seine from St. Cloud to Argenteuil. On both sides of the road the paths were covered with groups of soldiers drilling singly and being practised in positions, facings, manual exercise, etc. They were men of the reserve battalions, who had been sent to the front scarcely trained; as soon as the infantry found time they set to work to complete their instruction. I and the officer with me could not help laughing, but it was with joy and pride, for only in the Prussian army would such things be possible. Of this we were further convinced by the

remarks of the French inhabitants, who had come from both banks of the Seine, from Paris and the villages and were astonished at these doings. They said ; " Look at them, they are drilling still after their victory. If our fellows had won, they would have spent the whole day in drinking and amusing themselves. It is clear enough that we have no chance with them."

When I say that the training in detail of each individual man was one of the principal reasons why our infantry was victorious, I do not by any means maintain that even this might not be improved (for what human institution is altogether perfect?), nor that this manner of training is carried out as well and wisely in every infantry regiment of the German army as it is in the infantry of the Guard at Berlin. When I received the command of a division of infantry in the provinces, I found that the principles which I have stated above were by no means universally applied. The gymnastic exercises were practised more for themselves, because they were laid down, than as a means of instruction, while the class of recruits were more difficult to manage and the staff of instructors was not so skilled. The big and already well-shaped men who are sent to the Guard are naturally more easily trained than the many rather unshapely recruits who go to the infantry of the line. Men morally perverted, who have already committed crimes for which they are outside the pale of society, are never sent to the Guard, and thus the infantry of the line has to deal with thieves and other criminals. Moreover, the N. C. staff of the infantry of the line is not from its social position so well educated as is that of the Guard, since the attraction to the capital of the German Empire is naturally stronger than that to some small garrison, in which there is no opportunity of acquiring a connection which may be of use for later advancement. But how desirable it is that the N. C. officer should be better educated than the recruits will be evident to everyone who realizes what patience, as has been shown above, he must exercise towards the private soldier, and how superior he must feel himself to him, not to lose his temper when he comes across great awkwardness, taking care not to mistake the latter for ill-will, until he has made sure that ill-will does truly lie behind it, which is indeed often the case.

It is, therefore, of the greatest importance that the career of a N. C. officer should be made tempting to the more educated classes. Much has been done in that direction already; their life in the regiment has been made far more pleasant. But the most important point, to my mind, is that the State shall buy up the administration of all lines of railway. When all the railways, as were the post-houses, are administered by the state, no one except soldiers recommended for civil appointments will obtain employment on the railways, posts and telegraphs. Then all those who wish to embrace such a career, and have the necessary education, will be compelled to serve for the requisite time, and the N. C. officers will thus be supplied by a class of men so well educated, that it will be possible to promote them quicker, while perhaps the qualifying time for civil employment might be reduced to ten years, by which again the supply of well-educated men for N. C. officers will be increased.

I cannot here refrain from mentioning another matter. The practice in instruction which a N. C. officer has as an instructor of recruits is the very best preparation for the calling of civil schoolmaster. But never yet has a N. C. officer been made a schoolmaster; on the contrary, the candidates for such appointments have their term of service shortened. If the civil schoolmasters were selected from discharged N. C. officers only, a still larger number of educated men would select that career, while the teachers of youth, and the youth itself, would gain a greater sense of order, right and law.

Do not condemn me, on account of my proposals, as a reactionary, who wishes to enslave the whole country under the military power of the soldiery. Having an army organization, which is rightly called "The People in Arms," we ought during their childhood to train this people who are to bear arms to a sense of order and law, so that they may not some day sword in hand threaten the whole social order with destruction.

After this digression from my narrative, I will add that in the division of which I took over the command there were great difficulties with regard to language, since more than half of the recruits were Poles by birth, and most of these did not understand German. The sense of right and law was even less developed among them than among the lower classes of Prussia. Cases not seldom occurred, where men before they entered the service had committed serious crimes, such as arson, or where they falsely accused themselves of similar crimes, with the sole and only object of being transferred to a punishment company, and of being discharged from the army, so that they might not in case of war run the chance of being shot.

For all these reasons the system of individual instruction did not take such root in these regiments as in the infantry of the Guard. I did my best to introduce it gradually; *gradually*, since a matter which called for the zealous help and assistance of each individual could not be arranged all at once by a mere order. Indeed an order stood in the way of any such action, since by regulation the direction of the detail of the training of the men is the especial charge of the officers commanding regiments. In them I found willing assistants; good results soon showed themselves. Love of praise and emulation between the different regiments did the rest. Crime, punishments, want of discipline and desertions visibly diminished, and the men had in a few years a freedom and elegance of step, which compared well with the painfully stiff pace of the former soldiers.

In such a highly educated and willing body as is the Prussian corps of officers it is only necessary to suggest anything and the efforts of all the junior officers will certainly help most willingly to complete it and bring it to perfection. So I found in this case. The infantry of the Guard had already abolished the balance-step, my officers went further, and replaced, as a preparation to marching, the slow march by gymnastic exercises and worked back to the former from the quick march, just as in the case of a remount the short trot and the medium trot are developed from the natural pace. The success was most visible. Up to that time it had been found very difficult to teach the small Silesian men to take such long steps as

those required by the regulations, namely 100 to 80 metres. It was now found that the recruits could at the inspections in the barrack-square march 80 metres without difficulty in from 82 to 90 paces; one company had even taught its recruits to step metres. The men, being accustomed to such long paces, had no difficulty at a later date, carrying their packs and moving over uneven ground, in marching with the regulation pace of four-fifths of a metre, and developed a power of marching which often on the occasion of the manœuvres astonished both the superior officers and the spectators. It is moreover natural that the slow march with the balance-step should tend to shorten a man's stride, instead of making the recruit stretch his legs, for when he has to stand for a moment on one foot with the other extended in front of him, he is obliged to throw his weight on the rear foot, and this shortens the pace when the advanced foot comes to the ground. Again the slow march, with the balance-step, is an unnatural movement, which causes pain to the recruit in proportion as his muscles are wanting in pliancy. It must be quite wrong to begin with the most difficult practice; while when a man has once learnt to march in quick time the other paces are of no use. In former days these two kinds of marching were practised for choice by such instructors of recruits as had nothing to think of, who looked stupidly to their front, mechanically and slowly repeating; "21-22." Thus it happened that a tortured, though willing, recruit, driven to despair by the pain in his cramped muscles, would throw his rifle on the ground or at his instructor's head, and then had to be punished by law for such insubordination.

I am afraid that I have already annoyed you too long with these petty details! and I will not try your patience any longer to-day, since I propose in my next letter to examine in the same manner into some other points connected with instruction, unless indeed you write to tell me that you are weary of it all.

LETTERS ON ARTILLERY.

By PRINCE KRAFT ZU HOHENLOHE INGELFINGEN.

(From the Abridgment of Capt. Toutée.)

Translated by MAJOR W. L. HASKIN, U. S. A.

I.

UPON THE PART TAKEN BY THE ARTILLERY IN THE CAMPAIGN OF 1866.

THE feeble results obtained by the Prussian artillery, in 1866, produced a surprise in all the Army, so much the more painful because of the great expectations raised by the brilliant success of this arm in Denmark in 1864.

To whom then,—to what,—could be attributed the responsibility for the grievous inefficiency shown by the artillery? Surely not to the men who led it, says Hohenlohe, for these men showed, in 1870, the qualities which brought the artillery into the most brilliant prominence.

That we may reply to this question it will be necessary to survey the entire domain of the arm, to review its employment and the effects it produced in the last campaign, and to examine into its methods and the spirit which animates it. We can then go further and formulate some of the general rules which are henceforth to be imposed upon modern artillery.

The Prussian artillery had, in 1866, ten batteries out of every sixteen armed with rifled canon. The Austrians had all their pieces rifled, but the defects inherent to muzzle-loading,—a defective draught system,—poor percussion fuses—and shrapnel with fuse of irregular action,—made their material really inferior to that of Prussia, and we could consider ten Prussian cannon as equal to sixteen Austrian pieces.

If we glance over the work upon the campaign of 1866, edited by the Prussian staff, we find that the Prussian artillery almost always came upon the field too late, and even then in inferior numbers.

Thus at the combat of Trauteneau, a battery takes position at once on the right bank of the Aupa and is there reinforced by two pieces detached from the left flank; but at the end of an hour the three batteries of the advance guard on the left bank retire and take position upon high ground, where they can cover the retreat.

At half past two o'clock Major Noak brings up two batteries south of Trauteneau and succeeds in turning upon himself the fire of the twenty-four pieces, which are crushing the Prussian infantry. But from 3 o'clock till 5 o'clock these are the only batteries supporting the infantry on the left bank.

Seven batteries (42 pieces) remain in the neighborhood of the action without firing a shot. At 5 o'clock Noak's batteries abandoned the struggle and the artillery gives no more sign of life until 8 o'clock. At this moment two batteries take position to cover the retreat almost four miles in rear of the first position occupied by Major Noak.

Thus the Prussians have brought into action but 32 pieces in the whole course of the battle, and never more than two batteries at once. The infantry, which had been without artillery support during the three most critical hours of the day, had then the right to ask, "What has been done to-day with the 96 pieces belonging to our Corps?"

Again, the next day, the Austrian Xth Corps, which has 72 pieces, puts 64 of them in line, of which 48 form at the onset an imposing front of artillery. The Prussian Guard, which has with it 72 pieces, utilizes but 18 in all, of which only 12 are in action together.

Hohenlohe, who on this day was with the Reserve artillery of the Guard, brought it by a rapid march as far as Kosteletz, but there he was directed to await orders either towards Skalitz or towards Soor. The following day, after superhuman efforts to break a road through the encumbered routes, the Reserve artillery rejoined its Corps where the jibes of the infantry were not wanting.

At the combat of Skalitz, which took place the same day, the Austrians at first placed 32 pieces in line against 12 of ours, and towards noon 10 Austrian batteries (80 guns) were in action. On the Prussian side the batteries came up one after the other and produced no effect, for the first batteries

withdrew as the later ones came up. It is only toward 5 o'clock that the line reaches a total of 66 pieces, and that the Austrians cease renewing their attacks.

In all these combats the Prussian artillery, forgetful of the power to be obtained by the united action of the batteries, has engaged its batteries singly—has withdrawn them from action “to refit,”—contrary to the rules for modern warfare which prescribe that troops engaged against a more powerful enemy must be reinforced, and not withdrawn.

Again, in the combats of Nachod, the infantry under General Steinmetz was exposed for more than two hours to the fire of 40 Austrian cannon without having any support from the artillery. The Prussians had at their disposal 102 pieces, but the batteries specially detached to serve with the advance guard were not at the front.

At Gitschin, also, the Prussian 5th Division places in line but 18 pieces against 122 of the Austrian 1st Corps, reinforced by the Saxons.

At Kœniggrætz the action is begun by nine Prussian batteries spread out upon a front of five and a-half miles. From 8 o'clock until 11 o'clock the battle develops. Gen. Fransecky engages his 11 battalions with the 51 Austrian battalions, which defend the wood between Sadowa and Benatek: four batteries support his division, but what can 24 pieces accomplish when they are themselves cannonaded by 128 of the enemy's?

Near the center an Austrian line of 120 cannon established upon the heights of Lipa, holds under its fire from 8 o'clock till 11 o'clock the three divisions of the First Army which had seized the bridges over the Bistritz. Only five Prussian batteries reply to this fire of hell, which they do not succeed in diverting from their infantry. At 11 o'clock the Second Army comes upon the field. The Austrians form a defensive crochet toward the north, which is supported by 40 guns. The Prussians oppose to them 8 batteries at first, increased by half-past 12 o'clock to 90 pieces.

This is the single occasion, says Gen. Hohenlohe, where we obtained the numerical superiority in action.

But the struggle was very short; the hostile artillery withdrew upon the line Chlum,—Nedelist. This result, which we attributed, we Prussian artillerists, to the effect produced by our fire, was in reality the result of an order of the Austrian General-in-Chief.

Upon his last line of defense, Benedek had then 19 batteries, of which 16 were charged with the duty of repulsing a front attack. The Prussians opposed to them but 48 pieces. The action might have terminated otherwise had it not been for the impetuosity of the Guard, which did not leave time for the artillery combat to be developed.

The Austrian cannoneers, blinded by the smoke of their own pieces, preoccupied doubtless with the fire of our artillery, were surprised by a line of skirmishers which rose suddenly before them within good musket range. 68 pieces fell into the hands of the assailants.

“Scarcely had we replied by two salvoes slowly corrected, to the “deafening roar of the Austrian line when we saw limber chests explode, “the enemy's whole line cease firing, and vanish. General joy! Every-

"one enthusiastic over the power of our pieces! Alas! we had counted "for nothing, the Infantry had done all."*

The numerical superiority of the Austrian artillery continued up to the last moment of the battle. When 128 pieces supported the counter attack directed against the 1st Division of the Prussian Guard, this division had but four batteries with it.

Thus in all this campaign, the Prussian artillery, which counted as many pieces as its adversary, had but once been able to obtain the numerical superiority. It had, on all occasions, fought against forces two, three, and even four times superior in number.

Aside from its numerical inferiority, this artillery had shown what small effect was produced by its fire—its incapacity in regard to the supply of ammunition—its feeble resistance to infantry fire.

All these weaknesses were, later, made the subject of special study.

II.

UPON THE PART TAKEN BY THE ARTILLERY IN THE CAMPAIGN OF 1870.

The German artillery in 1870 found itself opposed to the French artillery under conditions incomparably superior to those in which it had commenced the campaign in Bohemia. On the one side the Prussian artillery was rifled and constructed according to the latest rules of the art. On the other, "The French had their old bronze cannon converted into rifles.

"These pieces, the equivocal result of a half measure, were in great "favor on account of the results obtained with them in 1859, but they "fired much worse than those of the Austrians in 1866."

Not only was their material better but the leaders of the Prussian army had learned how to bring their artillery upon the field as soon as its services were required, and to bring it up in sufficient numbers.

"I will confine myself to the actions which took place up to and including Sedan, as the later actions which occurred between instructed, experienced troops on one side, and uninstructed and inexperienced "troops on the other side, can furnish no good basis for rules for guidance in operations between armies of equal proportion."

From the very beginning of the campaign we see that tactics have changed.

At Wissembourg Bauer's battery opens fire almost with the chasseurs of the 10th Battalion. On that day 66 pieces go into action and engage, especially before the Geisberg and the gate of Wissembourg, at short range.

"The bringing of 66 pieces into action against the enemy's 18, in preparing the final attack, notwithstanding the great numerical superiority "of the German infantry, is characteristic of the appreciation of our artillery in this campaign in comparison with that of 1866."

Two days later the Crown Prince fought the battle of Woerth. Here the firm intention to employ the artillery from the very beginning of the action was the more characteristic as the battle was, in a manner, unforeseen, and was developed by the entrance into line of elements which came up successively.

* Where Captain Toutée follows the original text he uses quotation marks. The few interpolations made in his abridgment by the translator are for the same reason in quotation marks.—W. L. H.

At 7 o'clock, before the first musket shot, Caspari's battery, which marched with the reconnoitering detachment, opened fire. At the sound of the cannon General Bothner comes up and it is still the cannon with which he first speaks. General Kirchbach decides in his turn not only to support the reconnoissance but to capture the enemy's position. It is his artillery which he first deploys and he forms from Goersdorf to Gunstett an uninterrupted line of pieces. At half past nine o'clock, 108 cannon are in action while the infantry has not yet completed its deployment.

A little after 1 o'clock 200 pieces are in line on the front of the Vth Corps and yet the Germans have as yet but four infantry brigades engaged. When the infantry of the Vth Corps developed the front attack upon the vineyards of the right bank which has become legendary, and has won room for the artillery to take position, we see batteries hastening forward to the support of the skirmish line.

Again: the XIth Corps, which had at first sent four batteries with its advance guard battalion to Gunstett, engages twelve of its batteries while the main body of the infantry prepares for action. Two of these remain inactive at the beginning, not under the name of reserve however, but simply because there is no space in which to deploy them. When the infantry of this corps desire to leave the border of the Neiderwald to seize Elsasshausen eight batteries are sent to the front, take position under the heaviest infantry fire, prepare the way for the attack, and repulse counter attacks with canister.

At 4 o'clock 80 cannon had crossed the Sauer, and at short range had prepared the attack upon Froeschwiller. Single batteries accompanied the skirmishers in the assault upon the village.

The battle of Spichenen, also, was not premeditated for the 6th of August. The artillery, nevertheless, engages from the very beginning and at once takes the superiority.

Towards noon 24 pieces cross their fire upon the battery established upon the north point of Roth Berg. An hour later these pieces advance under the enemy's musketry fire as far as the Galgen Berg in support of the infantry attack against the Roth Berg. They force the enemy's artillery established upon this position to move still farther to the rear.

The divisions which came into line after the assault attempted by General von Francois send also their artillery to the front. From 4 o'clock until 6 o'clock seven batteries hold the French positions under their fire, and repulse all attempts of the enemy to regain the advantage.

Finally two batteries of the 5th Division enter the combat, and advance by a road declared impracticable up the slope of the Roth Berg. They take position under a most violent infantry fire and lose half their *personnel*, but little by little they drive the enemy who occupies the plateau, and finally assure the possession of the spur.

The decisive action of the day was the taking of the Forbacher Berg and of Stiring Wendell. 36 pieces prepare the way. Posted upon the heights of Folst they at first cannonade the objects designated, then advancing in part as far as Golden Bremm, they follow the general movement until night comes to stop them. 66 pieces had taken part in the struggle.

None of the batteries which were within reach of the field of battle had remained inactive. The 4th Light Battery of the 1st Corps even, which came from Koennigsberg by rail, was brought into the field and immediately went into action.

The battle of Colombey-Nouilly (Borny) opened, as did the battle of Woerth, by a reconnoissance of the advance guard, and as at Woerth, the troops in the vicinity come to the assistance of the force engaged. The action commences with a cannonade. Two batteries open fire almost at the same time. The advance guards of the 1st and 2d Divisions march toward the sound of the cannon. Their artillery, covered by cavalry, take the trot and distance them. Thus at a quarter to five o'clock General Von der Goltz comes unexpectedly into contact with the enemy and already 30 cannon have opened fire. At six o'clock the artillery of the main body of the 1st and 13th Divisions come at a trot upon the line which now contains 10 batteries. Meanwhile the entire artillery of the 1st Corps quits its bivouac and comes up, in part escorted by cavalry, in part without escort.

By seven o'clock 132 pieces are taking part in the action. One complete *abtheilung** goes into position beyond the Colombey brook upon the skirmish line itself.

The battle of Vionville, Mars-la-Tour, commences August 16th by a cannonade suddenly directed upon the bivouacs of the French cavalry.

The 30 pieces of horse artillery which took part in this *coup-de-main* produce disorder at first, but very soon the French infantry drive the German cavalry back upon the heads of the IIIrd Corps columns.

All the artillery at the disposal of the corps sets out at a trot. Towards ten o'clock the four batteries of the 6th Division, at half-past ten o'clock the two horse batteries of the corps artillery, an hour later the mounted batteries of the corps artillery, those of the 5th Division, and a battery of the Xth Corps, come to the support of the artillery of the cavalry divisions and form with them a mass of 21 batteries (126 pieces) which crowns the height from Tronville as far as the wood of Vionville. A part of this line is obliged to guard itself, before the arrival of its infantry, against the attacks of the French infantry.

From noon until the end of the battle these pieces, to which the four batteries of the 20th Division join themselves, continue constantly in action. Besides these four batteries the 20th Division sent four others, which marched with it to the assistance of the IIIrd Corps, and they prolonged the left wing to the north of Tronville.

"A part of this *abtheilung* pushed forward from St. Julien at a trot without any resort and came into position on the extreme left of the IIIrd Corps just in time to relieve the infantry which was being very severely handled and in danger of being forced back by a turning movement on the part of the French."

Thus the Xth Corps had put into line, before the arrival of its infantry,

* The German *abtheilung* of light artillery corresponds to the battalion of infantry. It consists of a group of three or four batteries, with a field officer in command, and the staff officers necessary to make it a complete organization. This was the *abtheilung* of the 1st Division and consisted of four batteries of six guns each.—W. L. H.

all the artillery belonging to it. It is these last batteries which co-operated in the fruitless attack upon the plateau of Bruville.

The 1st Horse Battery of the Dragoon Brigade of the Guard having come up, it lost no opportunity to take part in the battle. Finally, between 3 and 4 P. M. three of the batteries of the VIIIth Corps come into action. Thus we find that the 210 cannon which can reach the battlefield have for many hours taken part in the action together.

In the decisive battle of Gravelotte, St. Privat, the Prussian artillery accentuates still more its tendency to act in grand masses.

"About noon the desperate struggle was introduced by the artillery of the IXth Corps. The combat was begun by the artillery of the 18th Division and the corps artillery. 54 pieces move in front of the infantry with so much ardor and such contempt for the numerical superiority of the enemy that one battery loses all its *personnel* and the other "after two hours cannonading can scarcely be called serviceable."

"About an hour later (1 o'clock P. M.) the five Hessian batteries of the "other division come into action on the left of the Cusse woods increasing "the artillery line to 84 pieces. Then the horse battery of the Hessian "cavalry brigade comes into action on the same line to the east of Verneville which increases the number of guns to 90. Almost at the same "time that the Hessian batteries come into line the batteries of the 1st "Infantry Division of the Guard, and the corps artillery of the Guard "come up on their left extending the artillery line to St. Ail. About "1 o'clock there were therefore 138 pieces in action, and this before the "infantry masses had entered the zone of action."

At the same time at Gravelotte, 108 pieces come into line before the VIIth and VIIIth Corps.

At 3 o'clock the assault upon Ste. Marie-aux-Chenes was prepared by 13 Saxon batteries and 10 pieces of the Prussian Guard.

At 5 o'clock the German artillery was divided into three immense groups of batteries. On the right wing, towards Gravelotte, facing Point-du-Jour, were 162 cannon (27 batteries); at the center, facing Amanvillers, 78 pieces (13 batteries); on the left facing St. Privat, 180 pieces (30 batteries). 420 cannon had been employed together, before the infantry had executed the decisive attack.

It is believed that the artillery would have obtained for St. Privat, as for Ste. Marie-aux-Chenes a sufficient preparation if it had been informed that the attack was to be made.

In the final attack this artillery advances neck and neck with the skirmishers of "the sister arm," and contributes powerfully in repulsing the counter attacks of the enemy.

After the capture of the village the artillery crown the heights.

"I assembled there 14 batteries of the Guard," says the author. Very "soon after the action Strumpff brings on six others; and at nightfall four "batteries come from the Xth Corps which was in reserve. I had then "24 batteries, counting not quite 140 pieces, for a few batteries were incomplete, through having had a piece disabled in action.

"There were now in one line, uninterrupted only by the village of St. "Privat, 230 guns covering the zone towards the Bois de Jaumont, and "the Bois de Feves so that the enemy abandoned any effort to gain possession of the heights again. The deafening cannonade of this line of "artillery continued until darkness silenced it."

At the combat of Beaumont, which more than any other offensive battle presents great difficulties to the rapid appearance of the artillery in line, the batteries are so hurried through the defiles that in less than an hour after the commencement of the fight 180 pieces are in full activity. 72 pieces co-operate in the pursuit upon Mouzen.

At Sedan, Von der Thann, from four o'clock in the morning supports the entrance of the Bavarians into Bazeille by reserve artillery which he carries upon the left bank of the Meuse. This fire which in spite of the fog, was commenced so early in the morning, did very little execution. Three batteries (2 Bavarian and 1 Saxon) establish themselves east of la Moncelle and open fire at 6 o'clock. Two guns penetrate Bazeilles with the infantry and take part in the street fight at short range until nearly all the men are either killed or wounded. But at 7 o'clock the fog clears away, the view extends, and the fire becomes effective.

At the first information of the engagement at Bazeilles the commandant of the XIIth Corps orders his artillery, which is then south of Douzy to move forward at a trot. An hour and a half later this artillery opens fire from a position on the east of the Givonne ravine more than four miles from the point where it received the order. At half past eight 72 pieces were aligned upon the edge of the valley and held their position there in spite of the enormous losses which the French musketry inflicted upon them.

"Meanwhile the artillery of the Guard extended this line of artillery to the northward. It warmed the cockles of an artillerist's heart to see how all commanders immediately called for artillery. General von Pape had accompanied the rifles and fusileers as they brushed the few detachments of the enemy out of Villers Cernay and the woods adjacent. From the other side of the woods he could see the great line of guns which was cannonading the XIIth Corps from the opposite side of the Givonne. Bring me two pieces up here in order that I may enfilade this line, he said to me as I came up. Not 2 but 90, I replied, for the artillery of the Guard was coming forward at a trot upon the order of the corps commander, and was then close at hand."

The first *abtheilung* opened fire at a quarter before nine o'clock and the 90 pieces of the Guard were in action before the infantry was seriously engaged.

When Bazeilles fell the XIIth Corps seized the localities in the Givonne ravine and the advance guard of the Vth and XIth Corps came up at the back of the French army.*

On the side of St. Menges ten batteries of the Vth Corps opened fire at ten o'clock, and were joined towards eleven o'clock by the other four batteries of this corps. During this time the infantry was detained by the defile of St. Albert and this long line of artillery found itself somewhat in the air. But the general commanding the Vth Corps was observing from the height of Champ-de-la-Grange the progress of the combat, and laying aside all chief of corps jealousy, he sends the 10 batteries of his own corps to the assistance of the artillery of the XIth. This line of 144 cannon

* That is to say, at the north, Marshal MacMahon's direction of march being the south, toward Metz.

rejoins itself to that of the Guard and forms a circle of fire which surrounds the French army and which presses it still closer together.

The conduct of the Vth and XIth Corps demonstrates by experience that it is certainly possible to open the conflict, even in the offensive, by the fire of the grand masses of artillery. At the decisive hour of the battle the German artillery occupies the following positions,—South of Sedan; towards Frenois, are 114 pieces of the Wurtemberg Division and the IIId Bavarian Corps, cannonading the city. At Pont Maugy, 36 pieces (artillery of the IVth Corps) enfilade, though at a great distance, the position north of Bazeilles. At the east 114 pieces of the 1st Bavarian, and the IVth and XIIth Corps have crossed the Givonne ravine and cover Balan and the old entrenched camp of Sedan with their projectiles. 18 batteries of these three corps remain without employment, there being no place in which to deploy them. Farther to the north we find the 90 pieces of the Guard which search the wood of the Garenne. To the northwest extends the formidable line of the 26 batteries of the Vth and XIth Corps.

These 550 pieces, divided into five groups, represent four-fifths of the whole artillery of the two German armies.

TO RESUME.

1st—In 1866 we systematically abstain from bringing up the artillery to introduce the combat.

In 1870 we bring it up at the earliest possible moment.

2nd—In 1866 we consider it indispensable to preserve, or to reconstitute, at the hottest moment of the fight even, a reserve of artillery.

In 1870 this reserve is considered useless. The name even of artillery reserve has disappeared and (save in Bavaria) we call it the corps artillery.

3rd—In 1866, in view of this reserve, we keep the artillery as far back as possible, sometimes even a day's march.

In 1870 we push it as far to the front as we can, without depriving* it of support, and even, many times, we see corps send their whole artillery to the front without support.

4th—In 1866 we see the artillery move often with extreme slowness, but, having reached the position designated, come into battery at an elegant galop.

In 1870 it traverses space of many miles at a trot and finds itself in position many hours sooner.

FIRING AT MOVING OBJECTS FROM SEA FRONTS.*

By LIEUTENANT A. J. BREAKEY, R.A.

TO the notes on "Firing at Moving Objects from Sea Fronts," by Captain Henriques, R.A., in "Proceedings," R.A. Institution, June, 1888, I should like to offer a few remarks, the result of some slight experience during a course of this kind of firing from the Western Forts, Isle of Wight, this drill season, and of notes made from time to time on other occasions.

*From Proceedings Royal Artillery Institution.

As has been pointed out, the chief difficulties and uncertainties to be contended with, lie, in the inconstancy of the time taken in loading and laying the guns, in the difficulty of communicating the ever-varying ranges at the right moment to the right guns, and in the embarrassment caused to the directing officer by having his attention drawn from his duties of observation to watch when the guns are ready to lay.

Though it is unlikely that any system will ever be discovered which will entirely overcome these and the many other elements of difficulty to be met with, yet, I think that during the course above alluded to, we worked on one which promises, if properly carried out, at least to reduce them to a minimum. This system was based on what seem to be the two first principles of the subject, viz., that the guns must be layed for each round within a standard limit of time, and that time the shortest possible; and that the duties of those fighting a battery, though carried on concurrently, and mutually dependent, must be so arranged and portioned off, that squads and individuals have each only one class of work to perform.

The advantage of securing these two points is obvious, as the first in addition to saving valuable time, renders it possible to frame rules for allowances due to speed, etc., with reference to a constant time of laying and an average time of flight; and the second must reduce, if it does not altogether prevent, the confusion apt to occur in the heat of an engagement.

With regard to the laying, I think that all who have given the matter any thought, are pretty well agreed that unless men are specially trained to lay, on a fixed method and within a standard limit of time, it is useless to expect any, even fairly good results, in this kind of firing. Only a limited number of N.-C.-O.'s and men in a battery possess the qualifications necessary to make them good layers even at stationary objects, and with the target in motion the difficulty is much increased; but by selecting intelligent men with an aptitude for this work (which can very easily be tested) it is not difficult, with careful instruction and sufficient practice, to make them accurate layers at moving objects, and to secure their laying being completed, in a very short, and practically constant, space of time.

I saw a good instance of this in the case of the two Garrison batteries I was with in the Isle of Wight this year.

From each of them were selected about a dozen N.-C.-O.'s and men, and it was found that after a fortnight's training they could all be relied on to lay accurately, on a uniform system, at passing ships moving at various rates of speed, and at towed or drifting targets, in 15 seconds, which was taken as the standard of time proficiency. A like success had been attained in the case of several other batteries.

From what I have seen, I am convinced that unless a certain proportion of N.-C.-O.'s and men in every battery are so trained and kept efficient, no satisfactory result can possibly be attained in firing against objects moving at even moderate rates of speed.

There are of course some objections often urged against the idea of guns being laid only by certain individuals, but in the conditions under notice the case is a special one, and so much really depends upon the

efficiency and accuracy of this portion of the gun-service that there appears to be no other way of securing the required results. Any time would evidently be wasted which was spent in trying to teach men to lay who were clearly incapable (as many are) of ever benefiting by the instruction.

Regarding the distribution of duties, they can be classed generally under three heads:—

1. Observation, making calculations and allowances, and general direction of the fire.
2. Communication of orders and results of observation.
3. Service of the guns (including laying).

A separate staff is required to carry out each of these. The first and second are under the immediate control of the directing officer, the first being, of course, performed by himself. The third is under the direct control of the officers in charge of groups, but obtains all information regarding ranges, deflection, etc., through the channel of communication from the directing officer.

All calculations and allowances should be made by the directing officer at the observing station. In large works more than one observing station may be necessary, and to prevent confusion a certain number of guns would be told off to each, the defence of the work being split into sections, each internally complete.

The directing officer is relieved of a considerable strain if the depression range-finder is worked by assistants, as he is thereby left free to watch the fire and make the necessary calculations for deflection, etc.

We worked this way during our course with satisfactory results. Two N.-C.-O.'s who understood the instrument had charge of it; one followed the objects through the telescope, the other read the ranges off the drum at intervals depending on the speed, under the direction of the directing officer.

The communication of the ranges to the guns was effected in the following way:—As they were read out by the N.-C.-O. at the range-finder, the directing officer made the necessary additions and deductions, and then caused them to be shown on a large dial suitably graduated, which was worked by a couple of men, and set up on a portable stand adjacent to the observing station. Other dials similar to this were erected in rear of each group of guns in view of the main dial, and the men working them were taught to shift the pointers as the readings changed on the main dial, so as to indicate the ranges shown on it to the guns.

Thus, when ready to lay, the Nos. 1 had only to glance back at the range-dial belonging to the group their guns were in, to ascertain the range; but, as in the generality of cases, this range was either increasing or decreasing, and at the observing station a new range was read about every 20 seconds, the laying numbers were taught to set their tangent scales to the next range that would appear on the dials, and not to commence laying until the pointers marked it.

Now, at the instant the laying began, the tangent scales were not set at the actual range of the object, for a correction had been made (as stated

above) by the directing officer before the range was registered on the dials.

This correction was the addition or subtraction (from the range read off the range-finder) of the distance the object would travel during the time of laying, viz., 15 seconds, plus the time of flight of the projectile taken at an average of five seconds, or 20 seconds in all. Thus the Nos. 1 were, so to speak, laying 20 seconds ahead of the object when they started though the impact of the projectile with it took place at the end of that time when the object had reached the range at which the tangent scales were set.

Information regarding the amount of deflection to be given, as well as any general directions, were sent by orderlies from the directing officer to the officers commanding groups.

The method described above does away with the inconvenience, pointed out by Captain Henriques, of having to alter the elevation and relay a gun; as, even if a vessel changed her course or her speed in the middle of the operation of laying, there would still be a fair chance of the shot proving effective, so short the time till it reached its destination. The length of most ships would be an additional factor in favor of this.

Then again, bearing in mind that the *raison d'être* of most of the works on sea fronts is the defense of a channel or roadstead, and that the navigable space therein is usually limited, the conditions are unfavorable to great deviations in course or speed by individual ships of a squadron attempting their passage (except such alterations in course as would be necessary from a change in the direction of the channel, and which could be anticipated by the defenders); and the possibility of collisions or running aground would doubtless in many instances prevent them being tried sufficiently to embarrass, to any serious extent, those working the guns on shore.

It is clearly a great advantage if signals from Nos. 1 of the guns to the observing station can be done without, the observing staff being saved the strain of having to keep a watch for them, and a cross-fire of communications thereby prevented; for all would then pass in one direction only, from the directing officer to the guns.

I have only roughly touched on the outlines of the system we worked on, and have not attempted to describe details or to set down the rules employed for calculating the various allowances, etc. All this can be better done by those with whom the credit of its existence lies, and will no doubt be published for the benefit of the Service in due course.

It may however be remarked that no matter what the perfection of arrangements against attack, unless they are submitted to ample rehearsal by those who have to carry them out, there is little chance of their proving efficacious at the time when their application is required in real earnest.

Military Notes.

TRIALS (TARGET PRACTICE) AT BERNDORF.

(Translated by Lieut. L. Lomia, 5th Art.)

THESE trials took place in the month of February, at Berndorf, in order to confirm by a greater number of tests the excellent properties of the gun-barrels (Rubin) already admitted to exist in former practice. Two of these gun-barrels were used (calibre 7.65 and 8.15 mm.). They were from the Armory of Neuhausen. The latter of these barrels was mounted on a stock of the Mannlicher type (11 mm.), and furnished with the closing apparatus of the same rifle; the gun-barrel (7.65 mm.), on the contrary, was furnished with the closing arrangement of the Rubin system. The cartridges employed in the trials were Rubin's. The projectiles were nickel-plated. The results as regards accuracy of fire may be learned from the tally. It is necessary to observe, however, that during these experiments the shots were fired from gun-rests, and that in the trials at 400 m., and at 1600 m., after every 10 shots the barrels were cooled off, while in the trials at 800 m. and 1200 m., they were executed without reference to the heating of the gun-barrels. As may be gathered from the tables the accuracy of fire from the barrel 7.5 mm. is much greater than that obtained with the 8 mm. barrel.

DISTANCE IN METRES.	Space containing 50% of the hits in centimetres.				Radius of Circle containing 50% of the hits in centimetres.	
	HEIGHT.		WIDTH.			
	CALIBRE OF PIECE.				CALIBRE OF PIECE.	
	7.5 mm.	8 mm.	7.5 mm.	8 mm.	7.5 mm.	8 mm.
400	33	49.5	15	21.5	20	28.5
800	110	135.	37	71.	59	87.
1200	168	178.	65	128.	96	120.
1600	357	360.	85.5	133.	196	220.5

NEW ENGLISH FIELD ARTILLERY MATÉRIEL.

(Translated from the *Revista di Artiglieria e Genio*. By 1st Lieut. Luigi Lomia, 5th Artillery.)

From several English sources we gather that a new material is being experimented with for field artillery. The guns, that as a result of such experiments will in all probability be adopted are as follows :

20 pdrs. for batteries of position.

12 " " field batteries.

12 " Light for horse batteries.

Concerning the first of these guns only a few data are given, which are here noted. Very satisfactory results were obtained at 2000 yards; eleva-

tion, $2^{\circ} 47'$; angle of fall $3^{\circ} 45'$. Initial velocity, 1710 feet; remaining velocity, 993 feet. The charge is of 6 pounds of powder, and the bursting charge, 2 pounds and 1 ounce. The shrapnel contains 296 balls, while the canister contains 421 of them. The piece is drawn by 8 horses.

More details are given as regards the 12-pounder field gun; it is of steel and is of an average weight of 356 kg.; the length of the bore is 2.134 m.; the number of grooves is 12. The inclination of these increases from the origin to 909.3 mm., and becomes uniform beyond this point. The depth of the grooves is 1.016 mm., their width being 1.524 cm.

The vent is normal to the axis of the bore. The cannon is provided with two lateral lines of sight; the distance between the sights is 889 mm. The rear sight is inclined $1^{\circ} 30'$; it is graduated up to 13° , and its posterior face has also a graduation in yards. The rear and front sights are constructed in such a way as to obtain two lines of sight; the lower one is determined by a small aperture in the rear sight and the intersection of two threads in the front sight. This constitutes the best arrangement for pointing. The upper line of sight is made to pass through the notch of the rear sight and the top of the front sight. Some of these guns are provided with the telescopic sights after the Scott system.

The gun carriage consists of two pieces of steel bound together by transoms and bolts. The axle-tree is also of steel; the wheels have a diameter of 1.525 m., and are provided with a tire the width of which is 76.4 mm., and its thickness 14.3 mm. The naves of the wheels are further furnished with automatic friction checks to check the recoil.

The apparatus for pointing consists of an arched ratchet fixed on the breech of the piece, and by a cog-wheel arrangement which is found on the right side of the carriage. To the gun carriage are fixed two seats, each of which rests upon three (3) spiral springs. Between the cheeks are found places for the safe keeping of two canister shots and two cartridges, which are placed here only when advancing to take position. The limber is of steel; its axle-tree fixed to the cheeks is of hollow steel. The wheels are equal in all respects to those of the gun-carriage, and are with them interchangeable.

The caisson is also of steel and is provided with two chests. It is also provided with a shoe, chain and hook. The axle-tree and wheels are like those of the limber. The wheels, however, have no check. The chests, furthermore, differ from those of the limber only in their internal arrangements. The limber of the caisson is similar to that of the piece.

This 12-pounder gun fires three kinds of projectiles: the common shell, shrapnel and canister. Ordinary shells are of cast-iron and of steel. The latter are made use of in war, and also for land practice, while the former are only employed for firing at sea. There are also two kinds of shrapnels (steel and cast-iron): the former (with muzzle-loaders) are employed in war and for land practice, while the latter (with breech-loaders) are used in sea practice. The shells as well as the shrapnels are furnished with a compressible brass ring. The canister have the tin box internally reinforced by three (3) little bands of iron. The top is covered with a sheet iron plate tinned over, while the bottom is closed with a thick iron plate.

Around the base of the projectile is fixed a compressible brass ring. Other data on these projectiles may be gathered from tables herein annexed, and marked A and B.

A.

	GRENADES.		SHRAPNELS.		Canister.
	Steel.	Cast Iron.	Steel.	Cast Iron.	
Diameter of Projectile...	75.4 mm.	75.4 mm.	75.4 mm.	75.4 mm.	75.2 mm.
Diameter of Brass Ring...	78.35 mm.	78.35 mm.	78.35 mm.	78.35 mm.	78.35 mm.
Length	287 mm.	237 mm.	209.5 mm.	218 mm.	216 mm.
Internal charge.....	0.483 kg. P. Pebble.	0.217 kg. P. Peb.	21gr. L.G.	21gr. L.G.	
Total weight.....	0.203 kg. R. F. G.	0.058 R. F. G.	5.675 kg.	5.675 k. g.	5.60 kg.
Number of balls and their weight.	5.675 kg.	5.675 kg.	177 of 13 gr.		314 of 14.5 gr.

The service charge is 1.815 kg. of selected powder. With the limber of the piece and with the caisson the following ammunition is carried:

Limber, 10 grenades (ordinary), 22 shrapnels, 4 canister, 36 cartridges and 75 fuses.

Caisson, 20 grenades (ordinary) [10 in the limber and 10 in the rear carriage], 48 shrapnels [22 in the limber and 26 in the rear carriage], 4 canister (in the limber), 72 cartridges (36 in the limber and 36 in the rear carriage): 75 fuses carried in the limber.

The total weight of the gun-carriage, with its limber, is 1126 kg., and that of the caisson, also with its limber, is 1079 kg.

As to the ballistic properties of this gun, we find that the average initial velocity for the grenades and for the shrapnel is from 521.2 to 527.4 m., making use of the charge 1.815 kg.: for other data see the following table:

B.

Distances.	Angles of Elevation.	Angles of Fall.	Time of Flight.	Remaining Velocity.	Areas containing 50 per cent. of the hits.		
					Height.	Width.	Length.
Metre.	Degrees.		Seconds.	Metre.			
100	-16'	6'	0.90	506	0.0	0.0	27
500	+10'	38'	1.05	448	0.2	0.2	20
1000	58'	1° 40'	2.30	385	0.5	0.5	18
2000	3°	4° 42'	5.30	304	1.6	1.2	20
3000	8° 33'	9° 11'	8.81	263	3.9	2.2	24
4000	8° 56'	15° 12'	12.86	231	7.8	3.6	28
5000	11° 0'	23°	17.61	204			
5600	16° 3'	28° 30'	20.93	188			

As regards the lighter gun (12 pdr.) for the horse batteries, we only know that very satisfactory results were obtained at target practice. It fires the same kind of projectile as the ordinary field cannon, obtaining with it an initial velocity 468 m. Everything, therefore, leads us to infer that this gun is like the other in all respects, except that it is much lighter.

The English, by the adoption of this new *matériel*, promise themselves great progress in their field artillery. It is certain that these guns, in so far as we are able to judge, from the few data given, as regards construction and ballistic properties, may be numbered among the best now in existence.

TRAINING REMOUNT HORSES IN THIRTY DAYS.

(From the *Revue de Cavalerie*, December 1888, by J. C. B.)

La Belgique Militaire, No. 898, gives an account of the excellent system of training "to the whip" followed in the 2d Regiment of Lancers by Captain Van den Hove de Heusch.

La Belgique states:—theory is nothing, practice everything, and from this point of view success justifies the method followed by Captain Van den Hove, who has received most flattering testimonials from his superiors and the heads of the hippic world.

This year Captain Van den Hove has established the correctness of results obtained in previous years.

Friday last Lieut. Gen. Fisher, Colonel de Fauteur, all the officers of the 2d Lancers, and a number of foreign officers at the garrison, among whom we noticed Col. Gerhardt, former instructor-in-chief at the school of Saumur, attended the twenty-sixth lesson of remount horses at Lauvain.

Twenty young horses bearing their accustomed riders went through all the movements of the manège with remarkable coolness and accuracy.

It is known that the method of Captain Van den Hove, approved thirty years ago by Col. Gerhardt, is based on suppleness to the whip, "the diagonal effects," and unity of action.

The horse is rendered supple by the rider before being mounted, and this process has the immense advantage of forming horsemen, knowing admirably the "employment of the aides." It can be well said that this method is double as it trains both man and horse.

During the entire execution of the movements of the riding school, not a single horse hesitated to leave the rank or go through it, the men many times dismounting and mounting without difficulty, the horses remaining perfectly quiet and keeping the track. All carried their heads well. None of them "sought to bear on the bit."

The gaits were cadenced and the leaps over obstacles accomplished with the greatest coolness, the horses presenting themselves boldly at the barriers.

The skillful riders afterwards crossed large flames several times without fear, we can almost say with pleasure. This decisive test proves that no horse is governed by the eye. Discharges of fire-arms frightened none of them, and the march in closed ranks at various gaits could not be done more correctly.

The work in two rings was especially good.

The movement where the odd numbers, wheeling, bring the horses' heads to the wall showed particularly that they were well trained and the men masters of their mounts.

A horse becoming restive in a squadron at Liège, to an extent which obliged his being proposed for reform, was placed among those presented for this purpose. The method of Van den Hove completely overcame his resistance, a strong argument certainly in favor of the excellence of this system

Gen. Fisher testified several times his satisfaction and warmly congratulated Captain Van den Hove on the admirable results obtained.

The officers present and Col. Gerhardt particularly, were not sparing in their praises of the sympathetic and patient instructor.

TELEMETER WALFORD.

A telescope (A) is placed upon a tripod (B), and the object the distance of which it is desired to measure is covered by a vertical micrometer marked upon a glass-plate placed in (C), which may be moved by means of a screw, furnished with a graduated button (D) and with a fixed index (E).

A second telescope (F) is fixed upon the first, and at right angles to it. After making the observation the two telescopes are carried to and placed upon a second tripod placed at the other extremity of the base, and in their place, upon the first tripod, is placed a kind of alidade with two sights. This last consists, preferably, of two discs placed at the extremities of a bar, which is placed accurately in the same direction which, originally, the telescope (F) had. One of the discs has a vertical and central opening; the other disc is more open and is provided with a vertical thread, which marks its diameter. The telescope (A) may therefore, in this way, be placed exactly parallel to its first position, when the telescope (F) is directed, so as to see the sights of the alidade.

Now, by moving the glass plate (C) by means of the button (D) until its micrometer covers once more the object, note the resulting graduation. The distance from the object is given or obtained by the product of the base and the graduation on the button—this last having been made in a way to satisfy such condition.

ITALIAN NOTES.

Revista di Artiglieria e Genio, Rome, Dec. 1888.—The use of ballistic tables. The latrine. Italian field artillery. Notes on experimental coast defense material. Infantry rifle ammunition 1870-87. Instantaneous photographs of trajectory of high velocity artillery projectiles. English siege artillery firing experiments. Notes on the Favier explosive. Serpollet's instantaneous steam generating boiler. Resistance of cements. The penetration from rapid-firing guns. Notes on the reorganization of German field artillery. Austrian portable electric lighting plant. Belgium military telegraph service. The powder of Lebel rifles. Accidental explosion of melinite near St. Omer, France. The Deboutean magazine rifle. French electric submarine boats. Small calibre magazine rifles. German fortifications. Use of telephone in German army manœuvres. Experiments against Holstein's steel shields. English rapid-fire gun experiments against torpedo boats. Firing experiments with high explosive projectiles against the *Resistance*. Electric motors for working heavy guns. The armament of the Swedish war ship *Gota*.

Reviews and Exchanges.

"PERSONAL MEMOIRS OF GENERAL P. H. SHERIDAN."*

ONE of the great charms of this work is the easy natural manner in which it is written, without any effort at *fine writing*. Although personal memoirs, and necessarily placed before the reader in the first person, there is a becoming modesty displayed throughout the narrative, which is very refreshing and agreeable in contrast with many war descriptions of this decade. The autobiographies of Grant, Sherman, and Sheridan cannot be criticized as works of self glorification, but rather as straightforward *statements* of events as the authors viewed them.

The public rumors and press disputes as to his birthplace, are at once settled with "I was born in Albany, N. Y.;" this stroke of his pen sounds like the decisive stroke of the sabre.

His school-day reminiscences are amusing, and the limited amount of learning he acquired shows how greatly his natural gifts aided his successful career. Contrast his very modest beginnings, in a country store, with his eminent position when composing the book, and the old story, so common in this country, is taught that opportunities are afforded the humblest to gain the highest gifts of fortune.

His early career in Texas and the Pacific territory afforded a fine discipline for both body and mind, doubtless contributing to his after success in a larger field. The care and attention he bestowed on the comfort of his men gave evidence of his fitness for command and proved greatly to his advantage, for soldiers, whether regulars or volunteers, are but men and readily learn to love superiors who watch over their comfort and wants; to respect firm discipline if unaccompanied by needless annoyances; and to follow with confidence bold action and intrepid leadership. The military student reads with interest Sheridan's constant exertions to obtain full information regarding the localities in which he was operating, his careful study of military topography, and thus discovers that which appeared *at the time* as the successful risk of the brave and dashing spirit of war was the carefully arranged plan of the strategist and tactician.

The remarks of one of his subordinate commanders seem appropriate. "I felt in any attack he ordered, it was cheapest in the interests of my men

* New York, C. L. Webster & Co., 1889.

to succeed at all hazards in the first attempt, for he would keep us at it until there was nothing left with which to do it." "Also, if Sheridan *was* ever whipped in fair fight, there need be no anxiety as how to conduct the remnant of my command off the field, as a non-commissioned officer could command the squad." "But, after reading his book, I find I never did his ability full justice; I *now* reverence his memory as that of a Great Commander who in a disastrous retreat would have proved to be a Xenophon."

To attempt any review of the campaigns which General Sheridan conducted or in which he was a prominent figure, is impossible here; from personal perusal alone can the military lessons, problems and solutions of the same, so nobly presented, be correctly absorbed in the mind, but the reader, whether professional soldier, volunteer, or citizen, will read to the end with unflagging interest. Matters which at the time, to participants in the War of 1861-5, were obscure, in these volumes are, with rare skill and concise words, brought plainly to view and to the understanding.

The book is full of interesting incidents, and those who knew the author's humor will readily imagine the twinkle of his eye, as his pen recorded some humorous anecdote; as for example his interview with Secretary Stanton or the discovery of the female troopers in the cavalry battalion and similar narratives which enliven this military life as a literary work.

No officer of Gen. Sheridan's ability and position but what made a host of enemies; no compiler of events, like this author, but what disappointed many of the actors; but there is a singleness of diction in the bold, brave soldier's book which appeals to the sympathies; he is frank in statements, evidently desirous of doing justly by subordinates according to his view of his case. He argues with force and power, and his errors of judgment in individual instances are certainly the exception.

Abroad, Sheridan is viewed as the most *successful cavalry officer of the century*, and throughout the work one can see the intense desire to prove he was worthy to rank with the most successful generals of the age. Evidently he had his object in view when, modestly, yet with proper personal spirit, he placed his memoirs before the public and appealed to the careful professional reader to place on the page of History the name of Sheridan as a Great General.

EDWARD L. MOLINEUX,

Late Bvt. Maj.-Gen., U. S. Vols.

"FOUR YEARS WITH THE ARMY OF THE POTOMAC."*

GENERAL DE TROBRIAND is a charming writer. Without any disparagement to his soldiership, which is of a high order, it might be said that his "pen is mightier than his sword."

The book under consideration was prepared immediately after the close of our Civil War, and was written in the French language and for the French people.

In his preface to the French edition, dated May, 1867, the author says:

* "Four Years With the Army of the Potomac," by Regis de Trobriand, Brevet Major-General U. S. Vols. Translated by George K. Dauchy, late Lieutenant Commanding 12th New York Battery Light Artillery, U. S. Vols. With portrait and maps. Boston: Ticknor & Co. 1889.

"Everything which I have here related which I have not myself seen, I have from the evidence of the actors themselves, and by a minute comparison with the official documents and depositions *in extenso*, taken before the Congressional Committee on the Conduct of the War." The tripod of authority upon which the work stands is, therefore, 1st. What the author saw (and he kept a diary). 2d. What he calls "the evidence of the actors themselves;" but how that was obtained does not appear. 3d. The official documents and depositions before the "Committee on the Conduct of the War." By far the most interesting and valuable part of the work is that which rests upon the first leg of the tripod. Neither the evidence, as he must have received it, from "the actors themselves," nor the report of the committee on the conduct of the War, afford a substantial foundation for the accounts given of campaigns and battles which the author did not witness. The committee on the conduct of the War was an anomalous tribunal, which sprang from the loyalty and zeal of a free and earnest people. It was composed of Congressmen not of soldiers. It had its uses. The report furnishes some bright side-lights, but to rely upon that report as a basis for history and criticism must lead to error and injustice. When General de Trobriand wrote his book, the compilation of the War Records had not been commenced. Indeed, these indispensable vouchers for historical accounts of the Civil War had not been assorted. But few of those from the Confederate side had been received by our Government, and all—Union and Confederate—were, for practicable purposes, inaccessible.

For more than twenty years since General de Trobriand's book first appeared, the Government has been preparing and publishing the official records which are essential to correct and fair accounts of the campaigns and battles of the Civil War. It is not possible within the compass of a book review to point out the important discrepancies between the Records and the accounts given in "Four Years with the Army of the Potomac." Discrepancies were unavoidable in a book written at the close of the War, when, if the memory was fresh the feelings were strong. It would not be necessary to make note of them if it were not that, in the broad light of the present day the work is translated into English and published in this country without revision. Indeed, the author, without making or authorizing any revision of the historical matter, says to the translator: "Leave intact, without modification or extenuation, my judgment upon men and things, for, whatever may be otherwise their value, they have at least the recommendation in their favor that they are the honest expression of seasoned convictions based upon *facts*, and which I did not find cause to modify since the above was published." The "facts" in some instances turn out to be like the fact stated by the man who said the horse was sixteen feet high, and then stuck to it because he had said sixteen feet instead of sixteen hands. Yet General de Trobriand's "judgments" must stand. He adheres to his conclusion regardless of manifest changes in his premises, which is in effect saying to the world: "If the established facts of the present day do not agree with what I said twenty years ago, so much the worse for the facts." It is a pity the author takes this bombastic view of the subject. It is not meant here that the historical and critical part of

his work are wholly wrong; far from it. It is because the book is good that the American edition of it deserved revision that would bring it up to the enlightened standard of the present time. In so far as it conforms to the assurances in the preface, the book is of the highest interest. "This book," the author says, "is a narrative. I have limited myself to those things which I have seen. I tell of events as they have passed under my eyes, and as I wrote them down, day by day, in a journal;" and he adds; "the reader can follow me in perfect security." The parts of the book which conform to these assurances are admirable and delightful. So, too, in general, are the accounts of political matters, though the effect of political interference in military affairs during the War is overdrawn. The first chapter of the book, treating of the causes of the War is particularly good. The personal sketches, though not free from the appearance of bias, are spirited and graphic. The criticisms of high commanders are usually severe, in some cases harsh.

The grave defects of the book are in the accounts of events of which the author knew nothing of his own knowledge, and in the judgments he bases upon these accounts, and still adheres to. As heretofore mentioned, the book was written while the war feeling remained hot. It shows some strong prejudices, but that was to be expected. Prejudice is a natural outgrowth from those human organisms in which both the intellect and the feelings are highly developed. Yet it is an unwholesome fungus that ought not to be swallowed even when highly seasoned and daintily served.

A brief reference may be made to some questionable parts of the work. Undoubtedly, President Buchanan's part in public affairs between the election and inauguration of his successor (November 1860 to March 1861) was far from creditable, but there were extenuating circumstances which do not appear in the book. After the new President was elected, the old President was practically powerless. Congress (which assembled in December, 1860) did not heed Buchanan's recommendations. He submitted several measures looking to coercion of the South, but they were not acted upon. Everything which appeared to be of national importance was held by Congress to await the incoming administration. In fact, Congress was almost as uncertain as the President about what ought to be done. At that time, upon the question of the Constitutional powers of the Government, a large majority of the northern people shared Mr. Buchanan's views. The coercive power of the General Government was admitted to be ample within certain limits. That is to say, it could enforce its authority, acting directly upon individual citizens within a State, but it could not make war upon a State or upon the whole people of a State, guilty and innocent alike. This belief which merely embarrassed citizens, generally, completely confused and confounded the citizen who happened to occupy the Presidential chair. President Buchanan knew that he had no legal power to raise armies of his own volition, and if he had attempted to call out the Militia and increase the regular Army and Navy by his own order as President Lincoln did, after the fire upon Fort Sumter, it is quite possible he would have been promptly impeached.

In speaking of Pope's campaign the author says: "Finally the ill-will and disobedience of at least one of his corps commanders contributed sensibly

to defeat his plans and paralyze his efforts." The corps commander he refers to, is Fitz John Porter; and the author adds, "in regard to Porter's conduct, military justice has pronounced. He was cashiered, dismissed from the Army, and declared incapable of occupying any position of confidence, honor or profit, under the Government of the United States."

When the author (December 14, 1886) authorized the American Edition of his book, Porter had been restored to the Army by the nomination of the President and the confirmation of the Senate, the restoration being specially authorized by act of Congress. The restoration was the result of an impartial, and searching investigation by a just and learned tribunal, of which Major-General Schofield, now General-in-Chief, was President. This tribunal with essential information before it, which the court-martial did not and could not have, said, "the judgment of the court-martial upon General Porter's conduct was evidently based upon greatly erroneous impressions," and after pointing out these expressions, the tribunal adds: "The reports of the 29th and those of the 30th of August, have somehow been strangely confounded with each other. Even the Confederate reports have, since the termination of the War, been similarly misconstrued. Those of the 30th have been misquoted as referring to the 29th, thus to prove that a furious battle was going on while Porter was comparatively inactive on the 29th. The fierce and gallant struggle of his own troops on the 30th has thus been used to sustain the original error under which he was condemned. General Porter was, in effect, condemned for not having taken any part in his own battle. Such was the error upon which General Porter was pronounced guilty of the most shameful crime known among soldiers. We believe not one among all the gallant soldiers on that bloody field was less deserving of such condemnation than he.

"Having thus given the reasons for our conclusions, we have the honor to report, in accordance with the President's order, that, in our opinion, justice requires at his hands such action as may be necessary to annul and set aside the findings and sentence of the court-martial in the case of Major-General Fitz John Porter, and to restore him to the positions of which that sentence deprived him. Such restoration to take effect from the date of his dismissal from service."

In the face of these facts the American Edition of General de Trobriand's book appears without revision and with the injunction to the translator "to leave intact" the author's "judgments upon men and things."

Of the defenders of Fort Sumter, the author says: "They had done their duty—nothing more. Left to themselves, in a hopeless position, they had undergone a bombardment of two days, which injured only the walls, though they wished it to be well-understood that they yielded to force only: after which they had packed their baggage and surrendered the place. With the best will in the world, it seemed impossible to find anything heroic in it. And yet, to see the ovations given to them, to read the dithyrambs composed in their honor, it would appear that Anderson and his eighty men had rendered for America, at Fort Sumter, what in ancient times Leonidas and his three hundred had done for Greece at Thermopylæ." This is rather a narrow view of Anderson's part. The

strictly military defense of Fort Sumter was but a small part of his difficult service. To repeat what has been said upon a former occasion, never in the history of this country has a public officer been placed and held by his government in such a responsible and difficult position. With the end of an old administration and the beginning of a new one, with revolution and civil war fomenting, and neither administration knowing whether to rely upon conciliation or coercion, whether to pocket insults or resent them, whether to apologize or fight, Anderson, besieged by armed enemies for nearly five months, was furnished with no other instructions than equivocal ones, which at best fixed upon him the responsibility of submitting to humiliation and starvation in the cause of peace and good citizenship, or of precipitating civil war by responding to the distates of military duty and true soldiership.

It was not the military defense of Sumter, but his bearing under the trying circumstances that made Anderson's conduct heroic.

Speaking of General Scott, the author says (p. 49), "Enfeebled morally and physically by years, the old candidate for the Presidency saw but one issue to the strife already entered on, the division of the Union into four confederations."

This is entirely wrong. General Scott was never enfeebled "morally," and never thought the one issue of the strife would be the division of the Union into four confederations.

McClellan's part in the War invites adverse criticism, but the author seems too severe upon him. Certainly he is entitled to all that the development of the last twenty odd years have produced in his favor, as well as to the softening influence of time. In their eulogistic *Life of Lincoln*, Nicolay and Hay describe McClellan at great length and with no partiality for him. They have before them not only the official records, and the military publications to date, but all the papers of Mr. Lincoln. In conclusion they say in the last number of the *Century Magazine* (Feb., 1889):

"Thus ended the military career of George Brinton McClellan. Now, that the fierce passions of the war, its suspicions and its animosities, have passed away, we are able to judge him more accurately and more justly than was possible amid that moral and material tumult and confusion. He was as far from being the traitor and craven that many thought him as from being the martyr and hero that others would like to have him appear. It would be unfair to deny that he rendered, to the full measure of his capacity, sincere and honest service to the Republic. His technical knowledge was extensive, his industry untiring; his private character was pure and upright, his integrity without stain. In the private life to which he retired he carried with him the general respect and esteem and the affection of a troop of friends; and when by their partiality he was afterwards called to the exercise of important official functions, every office he held he adorned with the highest civic virtues and accomplishments. No one now can doubt his patriotism or his honor, and the fact that it was once doubted illustrates merely the part which the blackest suspicions play in a great civil war, and the stress to which the public mind was driven in the effort to account for the lack of results he gave the country in return for the vast resources which were so lavishly placed in his hands."

There are, of course, errors and omissions in the book, some of which may be noted. In his able chapter upon the causes of the War, the author,

describing the growth of the anti-slavery feeling in the North, says: "In 1848 ex-President Van Buren was the anti-slavery candidate. This fact alone is enough to show the great progress in public opinion during the administration of President Polk. General Taylor was elected, it is true, but the large number of votes cast for Mr. Van Buren gave the party he represented an importance, which, increasing from day to day, already presaged the part it would play in the near future."

This way of presenting a historical matter is misleading. The reader, especially a foreign reader, might well infer from the foregoing account that the Presidential contest in 1848 was between Taylor and Van Buren. The fact is, however, that the contest was between Taylor, the candidate of the Whig party, and Cass, the candidate of the Democratic party. The entire electoral vote was decided between them. Van Buren, the candidate of the so-called free-soil party, did not receive one electoral vote and polled only about two hundred and ninety thousand of the popular vote.

Speaking of the assumption of the Presidential functions by Mr. Lincoln, the author says: (p. 51) "Mr. Lincoln surrounded himself immediately with men devoted to the Union cause, and resolved to give force to the will of the people. They were: Mr. Seward, of New York, * * * for Secretary of State; Salmon P. Chase, of Ohio, Secretary of the Treasury; Simon Cameron, of Pennsylvania, Secretary of War; Gideon Wells, of Connecticut, Secretary of the Navy; Caleb D. Smith, Secretary of the Interior." Two very active and important functions are omitted, namely: Bates, the Attorney-General and Montgomery Blair, the Postmaster-General. Blair was a graduate of the Military Academy in the same class as Meade, and busied himself with military affairs in Lincoln's cabinet.

It would seem that there ought not to be any reason for mistakes about the date of the first Bull Run, yet we are told, p. 72, "The officers (of the author's regiment) were called together to choose a Colonel on the 21st of July, *the evening before the battle of Bull Run*. I was elected. On the 23d, *the morning of the battle*, a telegraphic dispatch announced to me that my regiment was accepted, etc."

The translator appears to have given accurately the meaning of the author, and to have preserved faithfully the force of the French idioms. Some parts of the translation are perhaps too literal. Page 48 affords an example: "Anderson and his little faithful troop were left, abandoned to their fate, and, under the effect of such an insult to the national flag, Mr. Buchanan humiliated himself to promise to send no more men nor munitions of war nor provisions to that handful of brave men who had displayed and defended the flag of the United States in face of the rebels of South Carolina." If one happened to turn from contemplation of the excellent portrait of the author, which forms the frontispiece, to page 48 of the text he could hardly read that page without a French accent. J. B. F.

"THE ARMY REGISTER FOR 1798."

LIEUT.-COLONEL ROBERT H. HALL, 6th Infantry, has "compiled and printed for private distribution" another of that series of military monographs with which his name is so creditably identified—the early Army

Registers, revised and reprinted. These are documents of too much public and historic interest to be unduly limited in circulation, as indicated by the compiler's modest note. Wherever the historian and biographer are wont to search for data, especially in every public library, a copy of this series of Army Registers should be deposited; and it would seem a matter deserving the attention of the War Department, and the appropriation of a suitable sum to multiply the compiler's edition, which we presume is insufficient for the general circulation suggested.

"The Register for 1798," in size, is a strong contrast to its portly successor of 1888; it comprises 12 pages, of which 8 are devoted to the list of officers and casualties, and the remainder to miscellaneous information. There was but one general officer: Brig.-Gen. James Wilkinson commanding the Army. The most jealous Line officer could not have criticized the size of the general staff, numbering but 5 officers, of whom 2 were of the grade of lieutenant. At the head of the "Corps of Artillerists and Engineers" was Lieut.-Col. Comdt. Stephen Rochefontaine; among the majors appear the well-remembered names of Burbeck and Tousard; among the captains, Moses Porter and Griffith McKee; while George Izard and Howell Cobb stood well down on the list of subalterns. The two companies of Light Dragoons represented the entire regular mounted force, while the "backbone" was supplied by 4 regiments of infantry of 8 companies each, upon whose rosters might then be found names, afterward Army household words, like Hamtramck, Hunt, Cushing, Harrison (W. H.), Whistler, Bissell, McIntosh, Lewis (the explorer), Sedgwick, Schuyler, Whipple, Pike, Heth, McCall, Strother, and others long since forgotten. In proportion to the size of the establishment the casualties were numerous. Among the resignations appears the name of Lieut. Robert Lee, 2d Infantry, and at the head of the deaths "Major-General Anthony Wayne, 15 Dec., 1796." The strength of the Army was 189 commissioned and 3158 enlisted, aggregating 3347. To each regiment and the Corps of Artillerists was attached a surgeon, while one of the Lieutenants was charged with the duties of paymaster.

The pay and allowances of the Army in 1798 are not suggestive of a desire to "reduce the surplus," but should be considered with due relation to the cost of living at that time. It is given herewith as part of the result of Col. Hall's careful researches.

Brigadier-General, \$104 and \$16 for forage; 12 rations per day.

Brigade Major, Inspector and Judge Advocate \$25 in addition to pay in line, and \$10 for forage; 2 extra rations per day.

Quartermaster-General and Paymaster-General, \$25 in addition to pay in line, and \$12 for forage; 6 rations per day.

Lieutenant-Colonel Commandant, \$75 and \$12 for forage; 6 rations per day.

Major of Artillery, \$55; Major of Infantry, \$50, and \$10 for forage; 4 rations per day.

Paymaster, Adjutant and Regimental Quartermaster, \$10 in addition to pay in line, and \$6 for forage.

Captain, \$40; 3 rations per day; Captain of Dragoons, \$8 per month for

forage; Lieutenant, \$30; 2 rations per day; Lieutenant of Dragoons, \$6 per month for forage.

Ensign and Cornet, \$25; 2 rations per day; Cornets, \$6 per month for forage.

Surgeon, \$45 and \$10 for forage; 3 rations per day; Surgeon's Mate, \$30 and \$6 for forage; 2 rations per day.

Sergeant-Majors and Q.-M. Sergeants, \$8; Senior Musicians and Sergeants, \$7; Corporals, \$6; Musicians, \$5; Privates, \$4; Artificers, Farriers, Saddlers, each \$9, with \$14 bounty for enlistment, and \$16 bounty for re-enlistment.

To the Brigadier-General while commander-in-chief, and to each post commander, double rations are allowed. Officers on recruiting service are entitled to \$2 for every recruit. Officers are authorized at their option to receive money in lieu of rations.

Each enlisted man of artillery and infantry to receive annually, 1 hat; 1 coat; 1 vest; 2 pairs woolen and 2 pairs linen overalls; 4 pairs shoes; 4 shirts; 4 pairs socks; 1 blanket; 1 stock and clasp; and 1 pair buckles. Suitable clothing, adapted to the nature of their service, to be provided for the dragoons. The daily ration to consist of 1 lb. beef *or* $\frac{1}{4}$ lb. pork; 1 lb. bread *or* flour; $\frac{1}{2}$ gill rum, brandy *or* whiskey; and, for every 100 rations, 1 qt. salt; 2 qts. vinegar; 2 lbs. soap; and 1 lb. candles.

T. F. R.

"JOURNAL OF THE UNITED STATES CAVALRY ASSOCIATION."*

While the conflicts of the earliest times were unquestionably waged by footmen, yet the horseman soon appeared, so that, indeed, in the history of the military art, the two are coeval. The strength and swiftness of his steed soon gave the cavalier an ascendancy in action which has existed even beyond the application of gunpowder in military operations, and down to so recent a time that it is yet difficult to realize that the conditions of service have so changed that its duties are now rather accessory than principal. But notwithstanding the fact that mounted fighting has come to be overshadowed in importance by the powerful ordnance of the present day, the horseman has still a prominent rôle to play.

The work in which our mounted service has been engaged during the years since the Rebellion has been eminently in accord with its new rôle. So important and absorbing has this work been, and so exacting has been his practical duties that the cavalry officer has had but little available time for the development of theory or the digestion of experience. The organization of the Cavalry Association indicates that in the absence of the more active labors of operations against Indians, now happily about ended, the activity of the mounted arms is to be turned into new channels, while the inauguration of the *Journal* of the Association demonstrates a disposition to make its work readily accessible.

The Military Service Institution hails with pleasure, the advent of an Association with aims so nearly identical with its own that one must necessarily be an inspiration and support to the other. There are so many vexed

* Published by the U. S. Cavalry Association, Fort Leavenworth, Kansas.

questions connected with the mounted service that much careful study and exhaustive discussion cannot but be of advantage. Moreover, the extensive experience in mounted and frontier operations, acquired by so intelligent a body of men as the officers of our cavalry, renders us confident in the anticipation of much information both of a novel and practical character.

The first three numbers of the *Journal*, now before us, completely fulfill the requirements of such a publication. The papers are scholarly, practical and timely. The editorial work is unexceptionable, and the mechanical execution leaves little to be desired.

JAMES E. PILCHER.

AMERICAN ARCHIVES, 5TH SER., VOL. I.

Before a General Court-Martial which met on Harlem Heights, September 19, 1776, and of which Colonel Sage was President, was tried Ensign Matthew McCumber, charged with *plundering, robbery and mutiny*. He was acquitted of these charges, but found guilty of offering violence to, and disobeying Major Box, and sentenced to ask pardon and receive a reprimand.

The Court reconvened under an order of the Commander-in-Chief, to reconsider the sentence, and *after taking new testimony*, decided upon the following new finding and sentence:

"The Court after a thorough reconsideration of the evidence for and against the prisoner, and after the maturest consideration of the further evidence which has been produced, are of opinion that the prisoner be cashiered for said offence *and he is accordingly cashiered*."

October 7, 1776, the Court again met by virtue of the following:

"General Orders, Headquarters, Harlem Heights, October 5, 1776.

"The General conceiving it to be his duty to lay before the Congress the proceedings of the General C.-M., on the trial of Ensign McCumber, has received the following orders from them, which he desires those members who were in favor of the first judgment would immediately comply with:

'In Congress, September 30, 1776.

Resolved, that General Washington be directed to call upon such of the members of the C.-M. as sat in the trial and concurred in the acquittal of Ensign McCumber, to assign their reasons for their first judgment, together with the names of such of the said members who were for the acquittal to be returned to Congress."

The Court say: "After mature deliberation it is the unanimous opinion of the members that we ought not to assign any reasons for the verdict of that Court. It has ever been an established maxim that judges should be free from all influence; that their opinions should proceed from the dictates of an honest and upright mind, and that no bias to any particular party should have weight in their judgment.

"Should we consent to assign reasons for our verdict on McCumber's trial, we think it would be establishing a precedent of the most dangerous consequences. Whenever the sentence of a C.-M. is disagreeable to a Commander-in-Chief or any other power, the members who do not concur in opinion with these are exposed to their resentment. This certainly must influence some persons and be of dangerous tendency. Men of spirit will

not attend the Courts and servile cringing men should not be entrusted with the lives of their fellows. We do not mean absolutely to refuse complying with the order of Congress. Let us be convinced that we ought to do it, and reasons shall be given. We are young and inexperienced in these matters and are only guided by the natural impropriety of the thing. Have not the Congress thought it improper? They have. By the last Article of War every member is to be sworn not to disclose the opinion of any particular member. Are laws to be made which are not binding on legislators?"

In forwarding this to Congress, General Washington, said: "From the information I have received, it has become a matter of much more general concern than could have been expected, insomuch that I will take the liberty to advise that it may rest where it is, having heard that most of the officers have become party to it, and consider that the resolve materially affects the whole."

J. B. F.

"NOTES ON MILITARY SCIENCE."*

This little book must, we think, have admirably fulfilled the purpose for which it was written. The many definitions are clear and concise and it would be a useful handbook for the soldier or military man to have always by him.

For the civilian it is a military dictionary—and though without an index it is a book in which he can readily find an answer to many a question he would often want to ask, should he take an interest in reports of progress in the Art of War, or in accounts of Military Invention, and we can recommend it to those who read accounts of foreign campaigns. J. Mc. C.

GENERAL GIBBON'S BATTLE WITH THE NEZ PERCES.

A History of Gen. Gibbon's battle with Nez Percés Indians in the Big Hole Valley, August 9th, 1877, based on the official reports of the action, on information obtained from the various officers, citizens and Indians engaged in it and from newspaper reports published at the time, will soon appear from the press of the "American Field," Chicago. This firm will also publish, shortly, "Cruisings in the Cascades," by G. O. Shields (Coquina.)

FOR REVIEW.

Personal Memoirs of P. H. Sheridan, General U. S. Army. (New York). Chas. L. Webster & Co., 1888.

Great Captains. A course of six lectures showing the influence on the art of War of the Campaigns of Alexander, Hannibal, Cæsar, Gustavus Adolphus, Frederick and Napoleon. By Theodore A. Dodge, Bvt. Lieut.-Col. U. S. Army. (Boston.) Ticknor & Co., 1889.

A Glimpse of the United States Military Telegraphic Corps and of Abraham Lincoln. By Wm. B. Wilson. A Military Telegrapher in War Time. (Philadelphia, 1889.)

A Leaf from the History of the Rebellion. By Wm. B. Wilson. A Military Telegrapher of the Time. (Philadelphia, 1889.)

* By 1st Lieut. Joseph M. Califf, 3d Artillery.

OUR EXCHANGES.

ARTICLES OF MORE OR LESS MILITARY INTEREST.

BRAZIL.

Revista Militar Argentina. (October, November.)

ENGLAND.

Journal of the Royal United Service Institution. (Vol. XXXII., No. 145.) The Equipment and Transport of Modern Armies. The Physique of the Soldier and his Physical Training. Military Cycling. Fire Discipline and the Supply of Ammunition in the Field as provided for by Foreign Powers. Fast Cruisers. Horse Artillery in Foreign Armies.

Proceedings of the Royal Artillery Institution. (October, 1888.) The Spirit of Tactical Operations of To-day. Firing at Moving Objects from Sea Fronts. Shrapnel Shell against Troops under Cover. Examples of Forced Marches performed by Horse Artillery and Losses in Action suffered by them. Wheel Draught for Mountain Guns. Experiments in Draught of Mountain Batteries, &c. (November, 1888.) A Tour in Bulgaria. Mountain Artillery. Combined Action of Field Artillery and Mounted Infantry. (December, 1888.) Land Fortifications. Method of Observing Practice. Notes on Minor Tactics. The British Artillery in the Waterloo Campaign.

The Illustrated Naval and Military Magazine. (December, 1888.) A Historical Sketch of the Russian Navy. Eugene of Savoy. A Visit to Montenegro in 1845. The Bussiene Disappearing Turret. Military Problems. The Haversack. (January, 1889.) Wanderings of a War Artist. Drill and Customs of the British Army under George I. The Book of Famous Duels. St. Vincent and Nelson from a French Point of View. Military Problems. (February, 1889.) Overland from India to Upper Burma. St. Vincent and Nelson from a French Point of View. Two Military Executions. Soldiers' Dress. The New French Submarine Boat "Gymnote." Military Problems.

INDIA.

Journal of the United Service Institution of India. Vol. XVII., No. 73. The Bulgarian Army. Horses for the Army in India. The Higher Education of our Non-Commissioned Officers. Cavalry Conventionalities. Letters on Strategy. Field Manœuvres.

ITALY.

Revista di Artiglieria e Genio. (October, November, 1888.)

SPAIN.

Memorial de Artilleria. (November, December, 1888.)

UNITED STATES.

The Century. (December, 1888.) Pictures of the Far West. Life on the Great Siberian Road. The Reorganization of the British Empire. Lincoln: First Plans for Emancipation. (January, 1889.) Horses of the Plains. Abraham Lincoln: The Announcement of Emancipation. The West Point of the Confederacy. A Letter of Lincoln. (February, 1889.) Pictures of the Far West. Lincoln, The Removal of McClellan. A Question of Command at Franklin. The Canal at Island No. 10. Machine Guns. Exiles at Inkutsk.

Bulletin of the American Geographical Society. (December, 1888.) China and its Progress. The Portuguese in the Track of Columbus. A Summer's Cruise to

Northern Labrador. The Problem of Interoceanic Communication through the American Isthmus.

Railroad and Engineering Journal. (December, 1888.) The English vs. the American System of R. R. Construction. Siberian Pacific Railroad. Accidents on Indian Railroads. The Latest Italian Warship. (January, 1889.) Naval Progress of the United States. Development of the Military Rifle. (February, 1889.) French Views of the Panama Canal. Petroleum Fuel. The Development of the Military Rifle. A German Foot-Bridge. The First Chinese Railroad. United States Naval Progress.

Proceedings of the United States Naval Institute. Vol. XIV., No. 4. The Necessity and Objects of a Naval War College. Notes on Steel Inspection of Structural and Boiler Material. Essay on the Tactics of the Gun. A Study on Fighting Ships. Naval Administration.

Journal of the U. S. Cavalry Association. (November, 1888.) A Horse Artillery Gun. Sheridan's Expedition around Richmond. The Operations of the Cavalry in the Gettysburg Campaign. Letters on Cavalry.

The Post Graduate and Wooster Quarterly. (January.) Protection as Our National Policy. Post-Graduate Methods in Germany. Military Training in Colleges.

Monthly Weather Review. (September, October and November, 1888.)

Scribner's Magazine. (December, 1888.) Railway Management. Photographing the Big-Horn.

The Forum. (December, 1888.) The New System of Naval Warfare. Teaching the Mechanic Arts.

Publications of the Department of Agriculture. Methods of Analysis of Commercial Fertilizers, Cattle Foods, &c. Insect Life. Report of Bird Migration in the Mississippi Valley in the years 1884 and 1885. Black Rot. Insect Life. Report on the Crops of the Year.

North American Review. (December, 1888.) General Viscount Wolsley. Our Postal Service. The Spirit of the Pioneers. (January, 1889.) Naval Wars of the Future. Is Yellow Fever Contagious? The Greater Half of the Continent. A Captain's Work. A Possible War. (February, 1889.) Coming Polar Expeditions. Misrepresentation in Congress. Naval Wars of the Future. Siberia and Land Tenure.

Harper's New Monthly Magazine. (December, 1888.) The Men of the Alamo. (January, 1889.) Colloquial English. (February, 1889.) A Russian Village. Norway and its People. Nepal, the land of the Goorkhas.

Transactions of the American Society of Civil Engineers. (August 1888.) The Canadian Pacific Railway. (September, 1888.) Some Facts in Relation to Friction. (October, 1888.) High Walls or Dams to Resist the Pressure of Waters (with Discussion).

Popular Science Monthly. The Guiding Needle of an Iron Ship. Inventional Geometry. (February, 1889.) New Chapters in the Warfare of Science. The Political Control of Railways. On the Causes of Variation.

Transactions of the Technical Society of the Pacific Coast. (November, December, 1888.) The Swamp and Marsh Lands of California. Experiments for Determining the Relative Tensile Strength of Iron and Steel. Tables on the Tensile Strength of Iron and Steel.

The Grand Army Review. To date.

Philadelphia Weekly Times. To date.

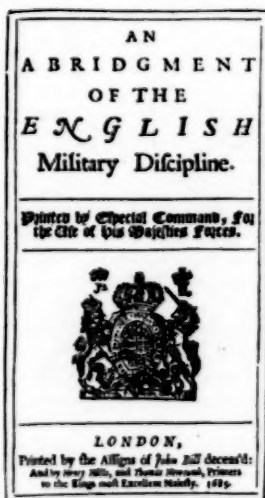
The Army and Navy Register. To date.

Somerville Journal. To date.

Science. To date.

Boston Courier. To date.

- Johns Hopkins University.* Johns Hopkins University Circulars. American Chemical Journal. (November, 1888.) Am. Journal of Philology. (October, 1888.) Am. Journal of Mathematics. (January, 1889.) Am. Chemical Journal. (January, 1889.) The Establishment of Municipal Government in San Francisco.
- Political Science Quarterly.* (December, 1888.) Socialism in English Politics. The Electoral Count. The Ballot in England.
- Magazine of American History.* (December, 1888.) Washington's Inauguration in 1789. The Declaration of Independence. The French Colony of San Domingo. A Trip from New York to Niagara in 1829. (The same, January, 1888.) Mecklenburg Declaration of Independence. A Trip from New York to Niagara in 1829. (Conclusion.) Slavery in New Hampshire. Revolutions in Spanish America. (The same, February, 1889.) Washington and his Family. Washington as President 1789-1790. Unpublished Letter of Washington in Fac-Simile. Slavery in New York and Massachusetts. Oriental Account of the Discovery of America.



Tenth Anniversary Meeting.

(Held at Governor's Island, N. Y. H., January 9, 1889.)

ANNUAL REPORT FOR 1888.

TO THE MEMBERS OF THE MILITARY SERVICE INSTITUTION OF THE UNITED STATES.

Gentlemen :—In making, in behalf of the Executive Council, a report of the operations of the past year, I am reminded that this is your tenth anniversary. Upon the occasion of your inauguration it was my agreeable duty, in compliance with your invitation, to address to you a few words regarding the high purpose of the founders of your association.

During the years that have passed, I have had no occasion to change the opinion, then expressed, that it is the mission of such an Institution to aid in preserving "the vital military germ from which your country expects great armies to spring in time of public danger, and to improve and perfect the methods by which such armies are to be rapidly brought into a state of mature strength and effective action;" that "as the duties of a military officer are becoming, year by year, more complex and more difficult to perform, * * * it is only by united and harmonious effort that the many may even approach to that degree of excellence which insures success in War; in this need of mutual aid we find the great utility and importance of such an association."

Upon the same occasion, I not only congratulated my brother officers upon the foundation of this Institution, but predicted "for it that great measure of success which will be worthy of your zeal in the profession of your choice and of your unsurpassed love of our country and of its free institutions."

Since then, a peaceful decade has passed, and to-day it is my privilege to report gratifying progress in the direction of that goal toward which our faces are hopefully set.

A survey of the growth of the Institution reveals some interesting facts. At its first general meeting forty (40) officers of the Army were enrolled; to-day we have a membership of 1150.

At the close of 1879, our Library possessed only 500 volumes; now it contains 6,000, comprising many rare books and MSS.; nearly all represent contributions or bequests. The Museum, from small beginnings, has become the largest collection of military relics and trophies in this country. Many valuable professional papers have been published in the JOURNAL, now in its tenth volume. The Gold Medal of the Institution, which the By-laws provide shall be presented annually for the best essay on a given theme, has been awarded as follows:

For 1880, to General John Gibbon; 1882, to Lieutenant-Colonel H. M. Lazelle; 1883 to Lieutenant A. L. Wagner; 1884, to Captain George F. Price; 1885, to

Lieutenant-Colonel A. A. Woodhull; 1886, to Lieutenant T. M. Woodruff, and for 1887, to Lieutenant A. C. Sharpe, all of the United States Army.

Honorable mention of Essays has been made as follows:

For 1880, Lieutenant C. E. S. Wood, and Captain, (now Major) E. Butler; for 1882, Captain F. V. Greene and General W. Merritt; for 1883, Captain O. E. Michaelis and Major (now Lieut.-Col.) W. R. King; for 1884, Lieutenant E. S. Dudley; for 1885, Colonel R. I. Dodge; for 1886, Lieutenant A. D. Schenck—all of the U. S. Army; and for 1887, Major Wm. Cary Sanger, N. G., S. N. Y.

During the last ten years the aggregate receipts were \$32,499.35; aggregate expenditure, \$29,361.13; remaining on hand, \$3,138.22.

Considering all the circumstances the retrospect is most encouraging, and the general condition of the Institution excellent.

The experience of those who have been closely identified with the management of the Institution suggests certain measures for its improvement. One of these is the establishment of "Branches;" assurances have been received that such an extension of influence would be successful and beneficial.

The duty of selecting from the articles contributed, those to appear in the JOURNAL, has, I understand, been a difficult and embarrassing one for the Publication Committee. It is the purpose of the Institution to encourage among its members that self improvement which is involved in the research and thought required for the preparation of a paper, as well as to present to the readers of the JOURNAL papers of professional interest and value to officers of *all branches* of the military service. In deference to this purpose and to the demand for variety in the contents of the JOURNAL, the Committee appears to have pursued, and I think should continue to pursue, a liberal policy in admitting articles to the pages of the JOURNAL.

The Publication Committee deserves thanks for the fidelity and discretion with which it has always performed its delicate and arduous duties.

We continue to enjoy facilities extended by the Government, especially by the War Department. It is a question whether the time has not arrived when the Military Service Institution may properly ask Government aid, to enable us to distribute its publications more widely among the Militia and the people.

I renew my congratulations upon the attainment of your tenth birthday as an association, and express the hope that, before another decade expires, your Roll of Membership may be a duplicate of the Army Register, and show large gains from the citizen-soldiery, and that the facilities afforded by the Institution, to all who desire information on military subjects, will be greatly improved.

J. M. SCHOFIELD, Major-General.

REMARKS.

GEN. SHERMAN.—* * Of course army and navy officers should profit by occasions of Peace to become thoroughly informed on all questions of history, law, ethics and matters specially pertaining to their own profession—but they must not neglect the rudiments, the goose-step, the squad, company and battalion drill, the care of men, horses, wagons, etc., and the thousand and one things learned by absolute contact with soldiers but not from books. The facilities of transportation and of the telegraph, now enable officers at Posts, which a few years ago were banished among the Indians, to keep up with the times, so that I was not surprised to learn that Lieut. A. C. Sharpe of the 22d Infantry, at Fort Abe Lincoln, had carried off the last gold prize—and I warn the young bloods of the Engineers and Artillery to look out, for a new breed is growing up which will contest their self-assumed honors, and it may be cut their

combs. I do not mean to invite or create jealousies, but to stimulate study and action by all.

In our noble, knightly profession to *do* noble deeds is the end: therefore action and intelligence must be combined. Anything which will bring the Line and Staff into closer harmony will be advantageous to the military profession of America. The tendency is to fly apart by a species of centrifugal force. I believe that the U. S. Military Service Institution can be made an element in this result, therefore I favor it, therefore I wish to encourage it without attempting to guide or influence its counsels.

GEN. O. O. HOWARD.—*Mr. President, Gentlemen and Members of the Institution:*—The fact of Lieutenant Sharpe receiving the medal and life-membership of the Military Service Institution for the best essay on "Organization and Training of a National Reserve" is deserving of high commendation. It gives me great satisfaction to find that a lieutenant stationed as far West as Fort Abraham Lincoln, on our frontier, if we may call it frontier, has been able to investigate such a theme and so thoroughly to furnish himself with information as to write successfully. He has been obliged to compete with officers of every grade and with those who have had the fullest access to public libraries. The papers were sent successively to Gov. Gordon, of Georgia, Gov. Hartranft, of Pennsylvania, and Gen. Slocum, of New York, and their separate judgment has awarded to him the honor and the prize.

An officer of high rank has recently called attention to the fact that the most successful Generals in the War of the Rebellion were those who had commanded posts on the frontier where they learned the different phases of administration and the best methods of supplying their garrisons. Life on the frontier, that is, at remote posts, is, however, of a character to depress the officers, and surely it is a good sign that some of them are able to collect material and compete for prizes offered by this Institution, whose fundamental object is to benefit the Army.

It has long been a favorite idea of mine that every officer whose time is not completely occupied in his professional duties proper should take up some specialty, preferably one connected directly or indirectly with his calling; and when professional work is not practicable, to select some branch of literature or some systematic professional study and thoroughly furnish himself. By so doing he keeps his mind in good training, free from the dulness that is apt to grow upon a young man who follows strictly the routine of duty. The simple routine, though he may be devoted to it so as to escape censure, often becomes wearisome, and sometimes leads him to dissipation. Active intellectual work is, of course, an effective preventive of this.

In times past many of our seniors have hugged the idea that the best course for an officer to pursue was to avoid all outside work; for example, I know of two young men in the West who prepared a "hand-book" for the use of the Militia, or National Guard, and submitted it for approval at Washington. Their work was discouraged. They were answered that, should their publication prove to be a success, then it would be time for the Government to take it up. I do not like that method of dealing with honest effort; and I believe that any changes which can be made in your organization with a view to encourage more young men *to study, to investigate, and to write*, the better it will be for young men and for the Service. And, as I said in the beginning, this case of Lieutenant Sharpe, where he strives not for the compensation but simply for the honor, gives me special satisfaction. In fact, anything that conduces to the improvement of the young men of our Army, to their honor and up-building, and to the good of the Service, will always meet a warm place in my heart.

GEN. SICKLES.—*Mr. President, Gentlemen:*—I am not prepared with any speech.

I have shared with you the pleasure of listening to the very interesting report of the Institution for the past year.

I have not been a very attentive member, but I think I always come when it storms.

I concur in the suggestion made in the report, that this Institution should be represented throughout the different branches of the Service, Cavalry, Artillery, and Infantry. I would also suggest that the General Staff should be represented and the National Guard or Reserve Militia. This could all be effected by orders from the parent Institution. I would call attention, particularly, to the General Staff, and to the great services expected of it in time of War. We did not appreciate the importance of the General Staff at the beginning of the late War, not having paid much attention to it, never having had occasion to understand the necessity of such a staff to a large army.

It is pleasing to learn of the prominence which this Institution has attained in a few years. With energetic culture and patriotic care it will rise to the place it deserves, not only as a military association, and from a scientific point of view, but it ought to be extremely interesting and valuable in an historical aspect, and I have no doubt it will become so.

I congratulate you, gentlemen, on the good work that has been done. It seems to me that our support and thanks are especially due to two officers, Gens. Fry and Rodenbough, for the devotion and real ability they have brought to our service, and I hope the result of this election and of future elections will be such as to promote the best interests of the Military Service Institution.

GENERAL CRITTENDEN.—*Mr. President and Gentlemen:*—I think I was at the meeting at which this Institution was first established. I have for some years past taken but very little apparent interest in the Institution; but the explanation is, that I am myself a worn-out old soldier; it is not that I don't feel as interested now as in the beginning—on the contrary I feel just the same interest as at the first.

It seems to me that I have done very little good in my life, but what little I have done in connection with the Institution, pleases me to remember and I think has been a good thing.

And now, if you will allow me, I will say that General Rodenbough and General Fry are much to be thanked for the prosperity of our Institution. If I reverse the order in which General Sickles has spoken of these two officers, it is not because I like General Rodenbough better than I do General Fry; it is because I think of him in the first place in connection with the Institution and its labors.

I cannot talk much more, I am hoarse as you all see and tired. I think the establishment of branches is essential to the prosperity and growth of the Institution. And this thought reminds me of the seal and motto of my native State—two men with their right hands clasped, and the motto "United we stand, divided we fall."

GEN. BUTTERFIELD.—*Mr. President and Gentlemen:*—It gives me great pleasure to respond to General Fry's request and say a few words. The report of our President that has been read to-day, is a most extraordinary document; brief, concise and clear as all of General Schofield's reports are, there are some striking facts given which every member may well be proud of. As far as the Institution is concerned it shows a noble record of having started ten years ago with only 40 members, and now numbering over 1100; during that time performing an immense amount of labor for the interest of the Army and the Military Profession. It brings into the treasury the sum of over \$33,000, and expends over \$29,000, this money used for the benefit of the Service, the Army, the public good, all or nearly all was contributed by officers and retired officers from their pay. During these ten years of the Society's work I have been absent from the country much of the time; but I have watched with great interest and care the work and publications of the Institution, and learned from personal friends of its progress. I have been much interested in the President's report, and the letters and discussions with

regard to the establishment of branch organizations. While in the whole work the Institution must necessarily be of an eclectic character, its fullest development in that respect will be gained through the establishment of branches both in locality and in specialties of arms and duty. In view of the statistics and figures presented, I think there is but one answer to one proposition of Gen. Schofield; permit me to quote from his report: "It is a question whether the time has not arrived when the Military Service Institution may properly ask Government aid to enable us to distribute its publications more widely among the Militia and the people." I hope to see in another year an effort made for the establishment of these branches and if it is promptly and strongly endorsed, there is no doubt but that we will succeed in securing aid from the Government, to widely distribute the publications of the Institution. Why should not the Government provide the means to place this valuable knowledge, gained by study and devotion to duty and to the Military Science, in every public library in the country and within the hands of every military officer. Work of the character carried on by this Institution, is a matter I have much at heart, and in my old regiment in the City of N. Y., we are doing what we can to preserve its proud records and encourage the younger officers in the knowledge of, and love for their profession. A project is under way for a Veteran Reserve Corps of the National Guard; at the proper time I hope to have steps taken for proper affiliation with this Institution. It is not necessary that I should further allude to the faithful and energetic work of Generals Fry and Rodenbough in their efforts to advance the best interests of the Institution. But, gentlemen, while we realize and acknowledge frankly their work, does it not occur to some of us that we owe them something more than kind words. Is it not time that our appreciation of it should be shown at least by every member making it his duty to increase the efficiency of the Institution and the number of its members, thereby increasing its opportunity for good?

GEN. VINCENT, (Assistant Adjutant-General.)—With reference to the future of the Institution, I am convinced that the establishment of "Branches," as contemplated by the amendment to the Constitution, will greatly stimulate interest, and thus lead to valuable results. The greatly enlarged sphere of action, that will result through the branches, will not permit it to be said that the Institution is mainly for the benefit of members at, or near, its present location! You are aware that an allegation to that effect was made by a prominent officer of high rank, serving in the Northwest, with whom I had correspondence looking to an increase of membership. I suggest that the official title of the branches be, for example: "Fort (Buford) Branch, Military Service Institution." At military stations where the membership is not large enough to warrant a local organization, a member should be charged with securing additions, from among the officers.

The contents of the JOURNAL should be confined, mainly, to professional military papers, original or copies, including translations from foreign military publications. To determine, experimentally, the character and variety which should mark the contents, an invitation might be extended to members to contribute on any subject they may select, this course to be open for one year. From the papers thus obtained I believe the Publication Committee would be enabled to determine what should be published, to the satisfaction of the average sentiment among members.

Our members, among the medical officers of the Army, might well make contributions which would advance the knowledge of their layman brothers. "Our little enemies," known under the general term of Bacteria, would furnish a good basis for papers relative to "some of our worst foes, with such fine names as bacillus, vibrio, and micrococcus." Our scattered army is quite frequently in contact with cholera, small-pox, chicken-pox, scarlet fever, diphtheria, typhoid fever, pneumonia and con-

sumption. Boils, carbuncles and hydrophobia are not unknown. Would it not be instructive to learn more connected with the little productive organism of such afflictions?

Officers of the United States Coast Survey, the United States Fish Commission, and naval officers having to do with ocean surveys, have written much to enlighten and entertain us as to the physical geography of the sea. Are there not reasons for hoping that our army officers, whose duties have been over our vast country,—much of it, up to a relatively recent date, “terra escondido,”—will be willing to contribute from their large fund of experience, which has prepared the way for the tide of civilization to move on?

LIEUT. KENNON (6th Infantry), A.D.C.—I do not feel very competent to discuss the points referred to, but as the points occur to me I will state them for what they may be worth: 1st. The pages of the JOURNAL should contain the very best military thought of the country; its articles should be of the highest character; its pages devoted to military topics and literature strictly; it should be the medium through which military information and thought may reach the public. The plan adopted by the Publication Committee in the past, as shown by the character of the articles heretofore published, seems to be the surest one, and has established for the JOURNAL a reputation of the highest. There is apparently, however, a lack of material for the committee to select from, which should not be. We should have a larger circulation in the Militia and National Guard. The Army Register for 1888 gives an “organized strength” of our Militia of 94,081. Every one of this number may be supposed to have more or less interest in military matters. A small proportion of them would suffice to give us a paying circulation for the JOURNAL. The JOURNAL should not be the organ of the Regular forces only. Its objects are of national and general importance, and it should reach all who are interested in these objects. This the National Guard should be and are, and I think the JOURNAL should reach more of them than I believe it does.

LIEUT. BLISS (1st Artillery), A.D.C.—In the mind of every man there is a tacit belief in all that is implied in the old adage, “Birds of a feather flock together.” Every officer who is a student at all, is *first of all* a student of his particular arm, and is naturally drawn towards others who are studying the same subject as himself. The trouble with our Institution is that it does not appeal at present to such officers with sufficient “home interest.” If you attempt to make the subjects for competitive essays of such a general nature that all can compete, you emasculate them; and when that is not the case, they require a great and varied range of information, and require practised writers to give them proper literary treatment. If you make the subjects “special,” it will be a long time before each arm of the Service can be represented in its turn. Therefore, men who are interested in a special study naturally and necessarily turn to an Association which brings them into *constant* contact with those interested in the same study. The question is, “How can this natural tendency be worked to the advantage of our Institution?” My suggestion is this: take immediate steps for the establishment of branches which, instead of being *general*, like the parent Institution, shall be *special*. Let us have artillery branches, cavalry branches, infantry branches, engineer branches, etc.; these will be our feeders. Give each of these classes the privilege of being represented by one paper in each number of the JOURNAL. Every issue would then have something of interest to each branch of the Service. * * For the preparation of these special articles some stimulus might be offered, such as remission of dues for a certain time, honorable mention, etc. These articles would avoid the necessity of even occasionally selecting a special subject for the Gold Medal. The general subjects should *always* be of immediate military interest and importance—tac-

tical and strategic studies, studies of campaigns, etc. Why should we not have "Symposia," half a dozen writers contributing articles on the same interesting episode? These need not be confined to the late War. The Mexican War would be a gold mine of interest to a great many. Let us offer prizes for the best half dozen regimental histories, with the privilege of printing any or all of the others. I believe that articles can be obtained which will give the JOURNAL a popular interest that will lead to its general sale.

THE CHAIRMAN (GEN. FRY).—I thank Generals Sickles and Crittenden for the kind terms in which they have mentioned my services; and I avail myself of the opportunity to make a few remarks which, under other circumstances, might not be appropriate. The existence of this Association is not to be credited to the zeal or services of one man, or any two or three men. Its origin, growth and success are due to the combined efforts and support of many persons, and to a general desire for professional improvement which found no encouragement and no outlet free from official restraint. The 1150 members of the Institution all possess the same rights and privileges, and are under the same obligations. The contributions for the JOURNAL and the services of the officers are all furnished, voluntarily, without pay. I for one, hope that the duties and responsibilities of the Institution may be distributed among the available members as widely as possible, not only for the purpose of imposing as far as practicable a due share of the labor upon every member, but for the higher purpose of securing for the country the benefit of the best thought, the judgment, and the influence of the entire membership. As for my own part, I feel that all the power of good for the enterprise in the way of active work, that I may have possessed, has been expended. It is not to the interest of the Institution to have too much of any one man. For more than fifteen years I have been living in New York city, and during the last eight years have been on the Retired List. Loss of army association is the distressing feature of retirement. I feel, with sorrow, that, to a great extent, I have lost the touch of the elbow with the active Service, especially the younger part of it, that seems to me essential to the proper conduct of the active affairs of this Association. Besides that, time tells upon us, and I realize that at my age, officers are too apt to be dominated by precedent, and that their tendencies and interests are reminiscent. Upon matters that are historic or encyclopedic, so to speak, upon points of tradition and in general counsel, "a worn-out old soldier," as General Crittenden has called himself and might call me, may yet be of service. But the invention, the preparation, the work, the push, the ambition belong to the generation which may look forward to reaping in actual war, the fruits, sweet or bitter, of what is done now.

I should like to see a Council of this Institution, with two-thirds of its members below the grade of major, in order to give strength and confidence to the element with which decision and action should rest; the other third being for deliberation and advice. With these views and speaking only for myself, I appeal to the active Army, especially to the men in the prime of life and the young men, to take hold of the Institution in earnest and make it what they want it to be. Let them put forth through its JOURNAL the information and thought and theories, that the times require, and issue the JOURNAL as frequently as the contributions on hand call for it. The Association is in good order. My voice is for having the active element work it. It costs nothing or next to nothing, and may make ample returns in the way of individual and general improvement and in personal distinction. Nor are its benefits and opportunities confined to the Regular Service. They are open to the Militia, some of whom have taken a useful if not a very active part with us. I appeal, also to them, the citizen soldiery, for earnest co-operation in the effort to promote the military interests of the United States. For

several years past the air has been laden with cries for better relations between the Army and the People and between the Regulars and the Volunteers. Here is common ground and we invite frank, friendly, and harmonious joint occupation of it.

Appendix.

REPORT OF BOARD OF AWARD ON PRIZE ESSAY, 1887.

I.

Division Headquarters National Guard of Pennsylvania, }
Adjutant-General's Department, }
Philadelphia, Nov. 20, 1888.

THE one which I regard as the best is that signed "Suaviter in modo fortiter in re 97," and the second in order of merit the one signed "Landsturm 54." After I had examined the essays and come to a decision, I laid them aside, intending to accompany them with some outline of my own views on the general subject embraced in their scope, but other business has prevented my doing so. I can only forward them, therefore, with a simple statement of their rank in the order of merit, in my opinion, and with this apology for the delay, am yours very truly,
J. F. HARTRANFT.

II.

Brooklyn, N. Y., Nov. 29, 1888.

I rate these essays in their order of merit as follows :

- First, Essay signed "Landsturm 54."*
- Second, Essay signed "Suaviter in modo fortiter in re 97."*
- Third, Essay signed "Veritas 35."*
- Fourth, Essay signed "Mollwitz 40."*

I am, very respectfully, your obedient servant,

W. H. SLOCUM.

III.

State of Georgia, Executive Department,
Atlanta, Ga., Oct. 1st, 1888.

I have read with great interest the four papers submitted for my criticism upon the question of the organization and training of a national reserve for military service. Those signed "Landsturm 54," "Suaviter in modo fortiter in re 97," and "Veritas 35," are especially able, and I have had some embarrassment in determining the relative merit of the two first-named. The article over the signature "Suaviter in modo fortiter in re 97," is able, elaborate and instructive, and I have been especially impressed with the views presented in it upon the "Localization" of the forces of the Regular Army and upon an Army Reserve in the Regular Army itself. I cannot so heartily endorse the portions of this article devoted to the creation of a new national force and the reorganization of the Militia. The article of "Landsturm 54" is a strong presentation of the plan to create a National Reserve out of the National Guard organizations of the several States. It is more practicable than any other plan which has been presented. It involves a reorganization of the National Guard, which, in some respects, is radical, but if this reorganization is effected in the way suggested by the writer, it can hardly create any jealousy of the Federal power among the people of the States. I give this article the palm of excellence. Respectfully submitted,

J. B. GORDON.

NOTES. "PRIZE ESSAY."

See p. 1.

1. Fundamental Constitution of Carolina of 1669.
2. American State Papers, Military Affairs, Vol. 1.
3. "Civilization in America"—Nineteenth Century Magazine.
4. Democracy in America,—Appendix W.
5. The legal distinction between war and insurrection and invasion should be noted. "Insurrection is not war and invasion is not war. The Constitution expressly distinguishes them and treats them as wholly different subjects. * * * * War is matter of law and not merely of fact." U. S. Supreme Court, December Term, 1862. Prize Cases.
6. The Congressional consent was withdrawn in 1867, when nine States were prohibited from keeping an organized militia.
7. The Legislature of Massachusetts as early as 1830 had granted conditional exemptions to all persons above thirty years.
8. American State Papers, Military Affairs, Vol. IV.
9. Towards the close of President Van Buren's administration, Mr. Poinsett, then Secretary of War, prepared a plan for dividing the entire territory of the United States into Military Districts. This plan was sanctioned by the President and forwarded to Congress with his approval. The memorable Campaign of 1840 followed soon after, and the Whigs magnified the measure into such horrible proportions of military despotism that it undoubtedly became, in the West at least, one of the elements of Mr. Van Buren's defeat.
10. The following is the preamble to the Constitution of the "Frederick County Sharpshooters," organized at Frederick City, Maryland, during the War of 1812:

"Having taken into consideration our situation as freemen at this present alarming crisis, when the yeomanry are called forth by draft and in classes to defend our shores from an invading foe, and thereby often falling into the company of men disagreeable, and under officers who are strangers to the men and the men strangers to them, thereby making the service disagreeable to both officers and men, the following constitution is adopted for the good government of those patriotic citizens who may be ready to assist in the common defence."—Private Papers.

Some of these early organizations are still in existence, among which we may mention the "Republican Blues" of Savannah, organized May 1, 1808, "The Georgia Hussars," 1815, the "Cleveland (O.) Grays," 1837.
11. The writer remembers when a child the feelings of awe and veneration with which he contemplated a pile of rusty sabres of prodigious size and weight discovered by him in his grandfather's attic.
12. Annual Report Adjutant-General of New York, 1887.
13. The last Annual Report of the Adjutant-General of Conn. (1887) shows 1007 enlisted men discharged out of a force of 2337. Of this number 410 men were lost by non-residence. In New Jersey "about 15 per cent. of the force changes every year."—Annual Report Adjutant-General New Jersey, Oct. 31, 1887. In the 47th New York Regiment in 1885 over 50 per cent. of the enlisted men had served but one year or less."—Annual Report Adjutant-General, New York, 1886, p. 191. In Ohio and other Western States the annual losses amount to fully forty per cent.
14. Senate Bill 3343, introduced last July by Senator Manderson, by request, "to provide for the organization and maintenance of the National Guard." Mr. Manderson stated that he was not in favor of the measure.

15. Estimated from Official Reports of Adjutants-General and other sources. Connecticut has paid for erection of armories \$300,000.—Annual Report, 1887. Cincinnati is now building an armory at a cost of \$100,000, and many others rivaling those of the Eastern States are now projected in the West.

16. The annual appropriations of the various States, however, cover but a small portion of the required outlay. Armory rents and repairs, care of arms, janitors' wages, gas, fuel, furniture, and many other items are provided for by the counties, or by contributing membership, fines, etc. Following are the appropriations in round numbers of States:

New York.....	\$350,000	Michigan.....	\$54,000
Pennsylvania.....	220,000	Iowa.....	35,000
Illinois.....	165,000	R. I., besides uniforms.....	24,000
Massachusetts.....	156,000	Minnesota.....	20,000
Ohio.....	111,000	Maine, besides uniforms....	16,000
Connecticut.....	110,000	Nebraska.....	10,000
California.....	89,000		

All the other States except West Virginia and Missouri make appropriations more or less liberal.—See Adjutant-General's Report, State of Missouri, 1886.

17. This policy, says Sir Charles Dilke, is characteristic of the English race.—*"The British Army."*

18. A commutation tax of \$2, is assessed in Connecticut, aggregating in 1886 over \$109,000.—Annual Report Adjutant-General, Connecticut, 1887. In Michigan and Ohio each captain is permitted to enroll 150 contributing members, who shall pay into the Company fund not less than five (in Michigan ten) dollars per annum, receiving therefor a certificate of exemption from jury duty. In Virginia and Illinois, a permanent military fund is created by taxation.

19. The Militia is the whole male population capable of bearing arms, whether enrolled or not. In a recent case in the U. S. Supreme Court said: "It is undoubtedly true that all citizens capable of bearing arms constitute the Reserve military force or Reserve Militia of the United States, as well as of the States."—*Presser vs. People*, 116 U. S. Reports 252.

20. Returns of the regularly enlisted, organized and uniformed active Militia of the United States, Adjutant-General's Office, Washington, July 2, 1888.

21. In Massachusetts, New York and Illinois, the soldier is sworn to support the Constitution of the United States, and in Michigan and Ohio the obligation to *serve* them is added. In Louisiana all officers take the same oath as is prescribed for the Army. Like provisions may be found in other States.

22. The reports of the Adjutants-General of nearly all the States show that applications are continually being received for permission to form new companies.

23. The massing of troops in case of imminent danger of invasion, insurrection or rebellion is sufficiently secured by Sections 1642, 5297, 5298, 5299 Revised Statutes of the United States. The authority to decide when the exigency is sufficiently grave to call for troops "belongs exclusively to the President. His decision is conclusive upon all other persons."—*Martin vs. Mott*, U. S. Supreme Court, 12 Wheaton. The President is also authorized to issue his orders direct to any militia officer he may think proper. But whether the National Guard as now organized would in all cases be willing to regard themselves as first for duty beyond the borders of their respective States may be doubted. The Adjutant-General of New Jersey, referring to this subject, says, "I am not one of those who think that our National Guard, as at present constructed, is expected or will be required, unless in a dire necessity and for a very brief period, to leave the bounds of this State."—Annual Report, 1887.

24. "The Army of the United States," by Gen. J. A. Garfield, *North American Review*, May, 1878.

25. Col. Closson's Report on National Guard of New York, Aug. 31, 1885.

26. The Adjutant-General of Michigan, in his report for 1885-6, says, "An inspector should be the ideal soldier; not only a capable and educated tactician, but one endowed with force and energy to make his personality felt throughout the command. It goes without saying that there should be no part of the soldier's business with which he is not familiar in all its details, and upon which he will not be an accepted authority. To accomplish the best results he must be dignified and firm in his intercourse with the companies, and so thoroughly educated and equipped for his duties as to be self-reliant and confident in his own ability, while by his perfect poise he can command the confidence and win the respect of the officers whose work he will be called upon to criticise and correct. It would be well if an army officer could be detailed to each State to devote his time to the inspection and instruction of the State troops. The beneficial effects of such a thing cannot be overestimated. It would bring into closer relations the Regulars and Militia, making of each an integral part of one national army."

The Adjutant-General of Ohio, in acknowledging the services of officers detailed to inspect the camp, says, "By their cheerful, able and willing assistance they have won the lasting gratitude of all the officers and men in the Ohio National Guard;" and the Adjutant-General of Connecticut writes, "The detail of these officers * * * and their intelligent and thorough methods, were of the greatest value to the National Guard, and more than realized my expectations."—*Annual Reports*, 1887.

27. Should all the organizations in existence be accepted we should have a force of over 100,000 men, which is deemed as large as the people would be willing to maintain. As the Reserve gained in popularity the force would be gradually increased.

28. Independent companies are generally regarded as injurious to the regular Militia.

29. In New Hampshire the Field officers nominate the Captains and Lieutenants to the Governor. (Const. of New Hampshire.) In Louisiana all officers are appointed by the Governor, but with slight variations, the system outlined is found in every State in the Union.

30. Section 1856 Revised Statutes provides that Justices of the Peace and all general officers of the Militia shall be elected by the people in such manner as the respective legislatures may provide by law.

31. "A Service of Love"—Gen. Lloyd S. Bryce, *North American Review*, Sept., 1887.

32. Examinations are now required in Massachusetts, Connecticut, New York, Virginia, Ohio, Illinois and many other States.

33. This is a statutory provision in most of the States and should in no case be relaxed. The Adjutant-General of California in his last report says: "I regret to say that within the last two years, three or four cases of embezzlement or gross misappropriations of State moneys have been revealed." A similar case occurred in Iowa. The execution of a bond would cure this and shield honorable officers from unmerited suspicion.

34. Recruitment is prohibited by special order in some of the States within a period of three months next preceding the encampment, but the facilities for drill are so limited in small armories that many of the men appear illy prepared for camp life. The enlistment period varies in the several States. In New York, Virginia, Illinois and Minnesota, it is five years; in Louisiana, four; in Alabama, Ohio and Michigan, three.

35. The average age of Colonels in the National Guard of one of the larger States recently ascertained was 44. Captains, 34. Subalterns and enlisted men, 26.

36. Col. Closson's, Report, August 31, 1885.

37. The Dress Uniform of Ohio, Indiana, Illinois, Iowa and other western States, is almost identical with that of the U. S. Service.

38. The officer who inspected the Massachusetts camps in 1886, says in reference to this subject: "The earthwork at South Framingham, has been of great service but does not meet the requirements of a regiment designated for heavy artillery instruction. More instruction in details is absolutely necessary, and it is impossible for the various companies or even detachments to visit South Framingham for this purpose as often as is necessary."

39. In Alabama, a fine of \$30 may be assessed for absence from drill. In South Carolina, officers may be fined \$20, and enlisted men, \$10, and in Michigan, \$4 is levied. See also States of New York, Ohio and Illinois.

40. An English writer referring to the necessity for a money allowance to the militiamen, says: "Excellent as the system of volunteer soldiery is, there must be a limit to the expense and risk which men can be expected voluntarily to incur. It is, I believe, the absence of some small daily payment to the volunteer cavalry which would have enabled the men partially to meet the heavy expenses necessarily entailed upon them by ten days in quarters, that has caused the collapse of so many corps."

41. In Wisconsin each man receives a per diem of \$2.50. In Massachusetts, \$2.00 is paid to enlisted men, \$2.50 to company officers, and \$4.00 to Field, Staff and General officers, and \$4.00 is allowed for horse hire. In New York, a private receives \$1.25, a non-commissioned officer \$1.50; Lieutenants, \$2.50; Captains, \$3.00; Lieut.-Colonels and Majors, \$4.00; Colonels, \$5.00; and Brigadier-Generals, \$6.00. In Ohio, one dollar is paid to enlisted men, and a gradual increase according to rank to officers. In Michigan, enlisted men receive \$1.25 and a colonel \$3.17. Alabama pays 50 cents to enlisted men and \$2.00 to officers. In Illinois, all officers and men receive one dollar per day regardless of rank.

42. Perhaps a more equitable rate would be that now prescribed for the Army, but this would not secure the men.

43. While there is manifest a general and earnest desire among the States for governmental co-operation, the States are still jealous of their prerogatives, and would not welcome any abridgement of their authority. The Adjutant-General of New Jersey writes, "It is a quite doubtful matter whether our Guard would favor the placing of its encampments under the control, direction and entire expense of the General Government. Our people seem to be willing to bear the expense incident to the disciplining of a force upon which they can rely in extreme moments. We have never sought for any direct control of our force or of our camps by officers of rank of the General Government, nor do I think that while we have in commission in this State general officers and regimental and battalion officers who have seen much of hard service in the Civil War, that they will for one moment consent to waive the responsibilities and duties of their office, and substitute in their room and place an officer of the General Government who may perchance in war times have commanded a company, and who never to this hour has had a thousand men under his direct control." We perceive, however, a ray of hope in the evident dissent from these views by the Inspector-General of the State, who says, "I hope the National Government will soon relieve the State of a great part of the expense of supporting the National Guard; it is eminently proper that this should be done. * * * A concerted movement is now on foot looking to this end, and which in my opinion should meet with universal approval and support."

44. The District camps would contain from 3000 to 5000 troops, except in the 7th District, which with present force would furnish about 1500.

45. Plan proposed for Camps of Instruction, Dept. of the Platte, Circular 2, Omaha, March 6, 1888.

46. The great mortality due to disease among volunteer troops is well known. In the War of the Rebellion 220,000 died from disease as against 110,000 by violence.

47. Col. Closson, referring to the Medical Department in New York in his report to the Adjutant-General, says, "The same exact and complete organization that has characterized all the Staff Departments is fully exemplified here, and was throughout the most prominent feature that came under my notice, and deserves special remark as showing the readiness and efficiency with which New York could put its military force into the field, with the whole system in good working order, by which their wants are to be manifested and provision made therefor."

48. States having too small a force to form a brigade, would be brigaded with adjacent States of the same district.

49. These provisions are found in many of the States, but not in all.

50. A constant rotation would be thus secured, those in National Encampment this year going back to State Encampment next year, to compete again for District camp.

51. The appropriation for transportation of the Ohio National Guard in 1887, was \$14,555, of which \$9,293 was expended.—Annual Report.

52. The Missouri troops were transported to and from camp gratuitously by the Missouri Pacific Railway Company, "though not perhaps without the expectation of increased travel likely to be attracted by the extensively advertised sham battle, and of consequent indirect compensation: other roads, not counting on such incidental benefit, charged one cent and in some cases two cents per mile per man."—Major Schwan's Report, 1886. Sunday excursion trains from all parts of the surrounding country are a familiar feature in connection with State camps.

53. Official Table of Distances, War Department, 1881.

54. The Adjutant-General of Massachusetts, says in his Annual Report for 1887: "It is with pleasure I record for the second time that the team selected from the Militia by the efficient Inspector-General of Rifle Practice, Col. Horace T. Rockwell, has won the first prize and also the Hilton trophy at Creedmoor by the highest score ever attained at this match."

55. All State armories in Connecticut are now supplied with good rifle ranges.—Report Adjutant-General, Connecticut, 1887.

56. The New York Statutes provide that State prizes, \$100 in value, shall be awarded annually to that Regiment or Battalion showing the greatest proficiency in each Division, and a \$500 prize to the Regiment making the best record in the State. \$1,500 per year is authorized for this purpose. Great interest is also observed in this instruction in Canada, where an annual appropriation of \$10,000 is made for the support of the Dominion of Canada Rifle Association.

57. The Deputy Minister of Militia and Defense, in his last annual report (January 1, 1888), says: "The various reports on the Royal Schools of Cavalry, Artillery, Mounted Infantry and Infantry, are very encouraging and show the beneficial results which have accrued to the Force by the military instruction that has been given to so many Militia officers."

58. *Democracy in America*, Vol. 2, page 323.

59. *Maverick National Bank Manual*, Boston, 1887.

60. *Wealth of Nations*.

NOTES. "HONORABLE MENTION" ESSAY.

(See p. 32.)

In the foregoing paper I have not only endeavored to state the principles upon which we should organize our National Reserve for military service, but I have tried to express myself in a way that would be clear and plain to the civilian reader. Important as is an agreement among officers as to the best way of correcting existing defects in our military organization, our greatest need is a proper understanding by the people of what we should have and why we should have it. I have hoped that if the paper possesses merits which entitled it to public notice, it might prove of interest to the average citizen who does not ordinarily concern himself with military matters. In that spirit I have added in these notes certain quotations from authoritative writings with which most officers are familiar, but which might be of value to other readers, as emphasizing important points to which I have merely referred.

W. C. S.

1. The "Present Position of European Politics," by Sir Charles Dilke. First published anonymously in the *Fortnightly Review*, and subsequently in book form.

2. These figures were compiled by Mr. Lewis Appleton. See *Galignani's Messenger*, Oct. 19, 1887.

3. See Table, page 33.

4. See the President's Message on the surplus.

5. See Report of General Schofield, 1887:

"Twenty-six years ago the fortifications and armament of the sea-coast of the United States were among the best in the world. Foreign navies possessed comparatively small aggressive power, and the means of ocean transportation were slow and limited. Hence, although the Regular Army of the U. S. was small and the organized Militia of the States not much larger, the country was in condition to make a vigorous defense against any probable foreign attack. In four years more the United States had become, through the necessities of Civil War and at enormous cost, the most formidable, in every respect, of the great nations of the world. Twenty-two years have sufficed to completely reverse this condition."

"Although the country has increased very greatly in population and immensely in wealth, it has become by far the feeblest in a military sense of all the nations called great. Population and wealth do not constitute military strength. They are only the elements from which military strength may be developed in due time and by appropriate means. They are like the fat of the over-fed giant, which may be converted into muscle in due time by appropriate training. But it is too late for the giant to commence training after he has met his well-trained antagonist."

"While other nations have increased their military and naval strength many fold, this country has made but little advance, and has even left its old defenses to fall into decay. It is a mistake, however, to suppose that the old forts and guns have become entirely obsolete. They would be not only useful, but essential as auxiliary to more powerful defenses. They only need to be supplemented by the more formidable weapons of modern construction suitably emplaced. But without such supplement, the old defenses are worthless."

Lieut. Griffin says in *JOURNAL OF THE MILITARY SERVICE INSTITUTION*, December, 1886, page 415:

"There is not a harbor on our coasts that cannot be captured with comparative ease by an iron-clad fleet properly armed and equipped: there is not a single important power in the world which does not possess such a fleet."

Lieutenant Greene says: "On the shores of the Atlantic and Pacific Oceans and the Northern Lakes, a series of great cities containing an aggregate population of more than five million souls, and destructible property which is carried on the Assessor's books with a valuation of \$4,000,000,000 (and has probably an actual value of nearly twice as much), yielding annually a product, in manufactured goods alone, valued at over one thousand million dollars.

"Every man, woman and child in this great population, every dollar in this vast aggregation of wealth is to-day in danger of destruction by a hostile fleet."

6. Lieutenant Griffin, *Ibid*, page 416: "A hostile fleet lying in the upper Bay of New York, would have within reach of their guns two billion dollars' worth of destructible property in New York City alone, and including Brooklyn and Jersey City, over two and a-half billions."

"See table in Lt. Griffin's article on "Our Coast Defenses," JOURNAL OF THE MILITARY SERVICE INSTITUTION, December, 1886.

7. See Article by Lt. Griffin already referred to, Lt. Greene in Scribner's Magazine, Genl. Schofield's last report, the report of the Chief of Engineers for the year 1880, and the report of the "Board on Fortifications and other Defenses" created by Act of Congress, March 3, 1885, and submitted February 26, 1886.

8. See articles by Lt. Griffin and Lt. Greene already referred to.

9. "The British Army."

10. See reports of Chief of Engineers, Chief of Ordnance and Fortifications Board.

11. It is undoubtedly an advantage to retain a certain number of old soldiers in the ranks but the privilege of remaining and getting the increased pay should be accorded as a favor to those whose presence in the ranks would be a benefit to the force. Sir Frederic Roberts has said: "While I would not advocate retaining many privates over thirty years of age, it would, I am sure, be wise to permit a few—say fifteen or even ten per cent.—to serve their time for pensions. I confess I should like to see a slight leaven of old privates in the ranks partly because such men are invaluable as examples to young soldiers, and in controlling them at times when it would not be desirable for non-commissioned officers to interfere."

12. "The British Army," page 114: "German scientific opinion declares that a perfect infantry soldier for offense can be formed in two years, and for defense in one. The infantry service is already reduced to little over two years by the *Congé du Roi*, and will soon be universally reduced to two years in practice. The best German officers point to the infantry of Frederick the Great and declare that that splendid force (except the 'foreigners,' many of them Germans) consisted of 'native' Militia who served for one year with the colors."

The effect of short service upon recruiting was shown by the fact that England could not keep her "Guards" up to the "establishment" with a six years' service, but was able to do so when the term was reduced to three years.

13. It is not without interest that this system of short service and Reserves was the result of Napoleon's effort to weaken Prussia after the peace of Tilsit, by limiting her army to 42,000. General Scharnhorst, King Frederick William III's Minister of War, whose genius has left a lasting impress upon the Prussian Army, adopted the principle of short service, passing the men into the Reserve and continually taking new men, so that in a few years the Nation had many thousand trained men, who were able at Leipsic to avenge Jena, and prove the value of the system which has now become almost universal.

14. See "The Enlisted Soldier," Prize Essay, 1886, by Brevet Lieutenant-Colonel A. A. Woodhull, JOURNAL OF THE MILITARY SERVICE INSTITUTION, March, 1887.

15. See Report of Gen. Schofield, 1887, already referred to.

16. Lieut. Wisser, U.S.A., in MILITARY SERVICE JOURNAL, June, 1887. "Minor Tactics."

17. Gen. Schofield, in his last Report, speaking of our inadequate preparation for War, says: " * * * it may be said, without exaggeration, that the United States have no fortifications, no armament, no army, no militia, no arms and no preparation whatever to resist successfully an attack from any first-class military and naval power."

18. See articles of Lieutenants Greene and Griffin.

19. Report of the Fortifications Board above referred to, and Report of Artillery Council, convened at New York, October 3d to 18th, 1887.

20. The opposition which many militiamen make to all attempts to bring that force into closer relation with the Army, and the indifference on the part of many army officers to the Militia, are largely due to mutual misunderstanding. It must be remembered that the rank and file of the two forces represent, one might almost say, the opposite extremes of our social system, and consequently the methods of dealing with them must be somewhat different. Many militiamen think that all who suggest bringing the forces into closer relations, wish to see the militia privates treated exactly like the privates in the Army, forced to undergo excessive physical strain whenever doing military duty, made to live on army rations, and drilled and trained into efficient soldiers by the same methods which army officers find necessary for training the rough element which is so largely represented in the Army. Some of the army officers in the same way fail to recognize the merits which militiamen possess, such as their pride and interest in the Service, their readiness to make personal sacrifices of time, money and pleasure in order to perform creditably their military duties, and their ability and capacity to endure hardships and fatigue should it be necessary to do so; and they forget that 99 out of every 100 militiamen are hardworking men in offices, shops and factories, whom it is useless, if not impossible, to subject in the odd days taken from their work, to the same physical strain as those men who are daily and exclusively trained in the work of a soldier.

If army officers knew the force better and understood more accurately its character, they would realize that the men possess many soldierly qualities and instincts for which they do not now give them credit, and they would see that they represent that splendid class of men upon whom we must eventually rely for our fighting force in any great war.

21. The remark is quoted in *The British Army*, page 33.

22. The following reference to the Militia by the late Gen. Sheridan, in his last Report, is of great interest:

"I am strongly in favor of the General Government extending all possible aid to the National Guard of the different States, as they constitute a body of troops that in any great emergency would form an important part of our military force. They should be armed with the best weapons, amply provided with complete camp and garrison equipage, and instructed in the various drills and exercises according to the tactics and system followed in the Regular Army. According to my observation and experience, most of the State troops now march well and handle the gun well, but they are deficient in discipline and in all the duties that teach a soldier to take care of himself while in camp or upon a march. This defect can best be overcome by establishing some system of encampment under the control and direction and at the entire expense of the

General Government. In the development of such a measure the entire Army, as well as myself personally, will be glad to render such assistance as lies in our power, and I recommend that the favorable consideration of the subject may be commended to Congress."

The internal organization of the Militia is a matter which concerns the members of the force, and I desire to state distinctly that the following are merely suggestions which seem to me likely to increase the efficiency of the Militia, as well as increase its value as a Reserve to the Army.

The question of the enlistment of men and the recruiting of the Militia regiments is one of the greatest importance. There is only one organization in New York State which can be said to be full. The others are all below the strength which they should have, and the greatest efforts are necessary to keep them up to their present relatively low figures. It is unnecessary to point out that this condition deprives the regiment of a proper choice in selecting their men and forces them to take many who, while they meet the legal requirements, are not what they should be. If we admit that there are not too many organizations, we at once meet the question, how can more recruits be secured, and how can existing organizations have a wider selection than they now have in their choice of new members? My own feeling is that the enlistment for five years without any possibility of leaving the force except for the reasons now recognized by law, prevents many good men from joining, and I believe that permission to leave before the end of his term of enlistment, if granted under certain restrictions, would not seriously diminish the time for which men serve. I would, therefore, suggest that when not on actual military service an enlisted man be given the privilege of resigning from his regiment at any time subject to the approval of the Commander-in-Chief upon giving one month's notice to his commanding officer of his intention to resign, and upon his paying to his regiment and company all such sums as might be by the company and regimental rules due and payable on his resigning; such sums should, of course, fully cover any loss to the State or regiment for articles supplied to or used by the man. The number of good men who would enlist should such a rule be adopted would in my judgment far exceed those who would avail themselves of the privilege of resigning. If this seems a dangerous step to one who is familiar only with our National Guard it should be borne in mind that it has been in practical operation in the English Volunteers for many years with excellent results. This force numbers over a quarter of a million and any member of it can resign in time of Peace on two weeks' notice. So far as I have been able to learn it is considered a most desirable feature of the present organization of that force by all its officers. Its excellent working there entitles it to the careful consideration of all those who would see our Militia not only strengthened numerically, but made more popular with a large class of young men who at present do not enlist. Many of these are men with an interest in military matters who would gladly join a regiment, but who are unwilling to bind themselves, absolutely, for a five years' service. This hesitancy arises oftentimes from a conscientious fear that they may not be able to do justice to the obligations they are asked to assume. Such men would be not only most valuable members of the corps, but if once in would in all probability serve their full time.

The present admitted difficulty in recruiting the Militia is undoubtedly due in a great measure to the fact that the requirements of the term of enlistment are too severe in imposing an unbreakable obligation on the recruit, an obligation which has been found ill-advised and unnecessary in a country which has a similar force more than double the numerical strength of our Militia.

23. See Report of Gen. Schofield, already quoted.

24. In the *Nineteenth Century* for April, 1887. Lord Wolmer describes a militia regiment. The occupations of the men in one of the companies were as follows:

Farm laborers, including carters' boys, cow-boys, under shepherds, etc.....	39	Mason.....	1
Laborers, including dock yard laborers, bricklayers' laborers, porters, unskilled merchant seamen, etc.....	34	Rivetter.....	1
Painters.....	3	Saddle-tree maker.....	1
Shipwrights.....	3	Clerk.....	1
Gardeners.....	3	Blacksmith.....	1
Butchers.....	2	Slater.....	1
Brickmakers.....	2	Steam-thresher.....	1
Bricklayers.....	2	Woodman.....	1
Grooms.....	2	Baker.....	1
Carmen.....	2	Cabman.....	1
		Bootmaker.....	1
		Under ship's steward.....	1
Total.....	104		

Out of the whole number in the company 58 live in villages and small country towns, 37 came from the two big seaports, and 9 live out of the county.

25. It is, of course, well known that the "Militia" in England is a force whose duties and time of service are in a general way similar to those which I have suggested for the Volunteers; but one objection to the force in England is that many men make it a practice to enlist in various districts and thus earn pay in more than one place. This is made possible by the fact that the annual training is held at different times in different places. A careful scrutiny of the recruit, such as I have suggested, especially if combined with a system of having all the men out for training at the same time, would lessen, if not entirely prevent, this evil.

26. Lieutenant-Colonel Savile, an English officer who has taken much interest in the formation of the English cycling corps, considers that the following uses can be made of cyclists in military work:

1. As orderlies, thus saving a cavalry man.
2. To support cavalry which is thrown out to the front as a screen or veil. In the Franco-German War on several occasions cavalry were checked by lack of infantry support. A body of infantry cyclists could be sufficiently near the cavalry to support them in case of attack.
3. To seize and hold any point which is tactically and strategically at some distance in front of the marching column.
4. Though not to be considered as capable of replacing cavalry, still, if the cavalry is numerically weak, cyclists may assist in scouting duties, and in the entire absence of cavalry, cyclists can perform the duties of cavalry, the infantry being sent forward to support the cyclists.
5. To ascertain resources or character of a country not occupied by an enemy, or to aid cavalry in this duty.
6. As guards for light convoys; as convoys of this character usually move faster than infantry, soldiers are apt to get on the wagons.

Colonel Savile has also pointed out that for all work which a cyclist can do as well as a cavalryman, there is a saving in the following ways:

1. Original cost of cycle is less than of a horse.
2. Care is cheaper, horses requiring detail of men to groom and care for them.
3. Food is saved.
4. Cost of saddlery is saved.
5. The large transport of cavalry is obviated.

It has been questioned whether cyclists can be successfully used for all these objects, but there can be no doubt that for certain purposes they would add materially to the efficiency of any force.

27. *The British Army*, page 149: "There are lines of communication to guard, fortresses to be seized, and all manner of duties to be done behind every fighting

army, but according to modern systems of war, the active army of the first line has nothing to do with any work of this kind."

28. See Report of Artillery Council previously referred to.

29. See in the *Nineteenth Century*, May, 1886, "A Volunteer Battalion" by Col. R. W. Routledge, commanding 2d Volunteer Battalion, Royal Fusiliers.

30. Genl. Schofield in his last Report, already quoted from, in speaking of joining the two forces for actual work, says:

"Annual association of the Regulars and Militia would, it is believed, be beneficial to both, and it would establish, in advance, the relation and mutual understanding between them which ought to exist at the moment when war is threatened.

"The joint encampment of batteries of the Second United States Artillery with the National Guards of Mississippi and Louisiana, which was held at Pass Christian in the month of August of this year, was an excellent illustration of the good which may be accomplished in this manner."

31. "In its system of tactics the German infantry works by small bodies, beginning even from what is called the group under a non-commissioned officer, and that group is tactically trained as thoroughly as the division of the Army Corps. Every German non-commissioned officer is taught to consider himself a leader of men, not only in the barrack-room, but on the field of battle; nor does the captain of a company allow his recruits to work in line with the rest of the company until they have been instructed in the tactical duties of individuals and of groups * * * the point now to be fixed in our minds is that the German soldier is told to consider that the safety of his country may depend upon his individual bearing and intelligence in war." (*The British Army*, pp. 175-6.)

"Every military writer of repute holds the opinion that the necessity for thorough tactical knowledge comes down much lower in armies than it used to do, and that even non-commissioned officers must now be able to handle small bodies of troops with a tactical insight which used to be looked on as the attribute of generals only, or of senior officers acting as such. The whole system of modern fighting seems now to be based upon the principle of subdivision into very small units, each of which, in attack or defense, should have a capable leader, even if he be but a corporal. The latest French regulations for infantry attack are very clear upon this score, and one of the points most strongly insisted upon by Lord Wolseley is the necessity for revising the English infantry exercises in the same sense. Instead of the drills which have hitherto formed the total amount of military knowledge with which an officer must show his practical acquaintance, there must now be constant practice in field manœuvres." (*Ibid.*, pp. 241-2.)

32. A call was once made in England, at the time of their volunteer manœuvres, for a given number of men who could cover twenty-five miles a day, with arms, ammunition, etc., and would be prepared to sleep in the open and live for twenty-four hours at a stretch on what they could carry. More than the required number volunteered, and those chosen proved fully equal to their work.

The Military Service Institution.

President.

Major-General JOHN M. SCHOFIELD, U. S. Army.

Resident Vice Presidents.

Major-General O. O. Howard, U. S. A.

Bvt. Major-General JAMES B. FRY, U. S. A.

Secretary.

Bvt. Brig.-Gen. THEO. F. RODENBOUGH, U. S. A.

Treasurer and Asst. Secretary.

Lieut. J. C. BUSH, 5th U. S. Artillery.

Vice-Treasurer.

Lieut.-Col. HEMAN DOWD, N. G., S. N. Y.

Executive Council.

("Six members to go out, by rotation, biennially.")

Term ending 1895.

ABBOT, H. L., Col. Corps Engineers, B.-G.
COOK, G. H., Captain A. Q. M.
CURTIS, H. P., Lieut.-Col., D. J. A. G.
HAGER, A. Lieut.-Col. A. M. P.
LODGE, R., Lieut.-Col. 5th Artillery.
MORDECAI, A., Lieut.-Col. Ordnance Dept.

Term ending 1893.

COPPINGER, J. J., Lieut.-Col. 18th Infantry. Col.
HICKEY, J. B., Lieutenant 8th Cavalry.
SUTHERLAND, C., Colonel Medical Department.
TOMPKINS, C. H., Colonel A. Q. M. G., B. G.
WEBB, A. S., Bvt. Major-General, (late) U. S. A.
WHIPPLE, W. D., Colonel A. G. D., M. G.

Term ending 1891.

BREWERTON, H. F., Captain 5th Artillery.
HAMILTON, JOHN, Colonel U. S. A.
HUGHES, R. P., Colonel, Insp-General.
PILCHER, J. E., Captain Med. Dept.
RANDOLPH, W. F., Major 3d Art., M.
VIELE, E. L., Brig.-Gen. (late) U. S. Vols.

Finance Committee.

General FRY, Colonel HAGER, Captain BREWERTON.

Publication Committee.

Generals ABBOT, RODENBOUGH, Colonels HUGHES, COPPINGER, and Captain CHESTER.

Committee on Library and Museum.

General TOMPKINS, Colonel MORDECAI and Lieut. VOGDES.

Memorandum.

The Military Service Institution has published the thirty-seventh number of its Journal of Transactions: containing the Prize Essays and other Papers submitted to the Institution; a Manual of its Origin and Progress, and a Catalogue of the Museum. It offers a Gold Medal and Life Membership annually, for the best Essay on a given theme. The War Department has authorized the occupation of commodious rooms on Governor's Island for its Library and Museum, and has ordered the Quartermaster's Department to transport, without expense to the Institution, contributions of books, trophies, or curious relics. The Institution corresponds and exchanges publications with the principal military societies at home and abroad.

Membership and Dues.

(1) "All Officers of the Army and Professors of the Military Academy shall be entitled to Membership *without ballot* upon payment of the Entrance Fee."

(2) "Ex-Officers of the Regular Army, in good standing and honorable record, shall be eligible to full Membership of the Institution, *by ballot* of the Executive Council."

(3) "Officers of the U. S. Navy and Marine Corps shall be entitled to Membership of the Institution, *without ballot*, upon payment of the Entrance Fee, but shall not be entitled to vote nor be eligible to office."

(4) "All persons not mentioned in the preceding sections, of honorable record and good standing, shall be eligible to *Associate Membership* by a *confirmative vote of two-thirds* of the members of the Executive Council present at any meeting; *provided*, however, that the number of these Associate Members shall be limited to two hundred. Associate Members shall be entitled to all the benefits of the Institution, including a share in its public discussions; but no Associate Member shall be entitled to vote or be eligible to office."

Membership dates from the first day of the calendar year in which the "application" is made, unless such application is made after October 1st, when the membership dates from the first day of the next calendar year.

All persons eligible for Membership are urged to join at once, and are asked to recruit for an Institution which has the military interests of the country at heart.

An Entrance Fee of Five Dollars (\$5) shall be paid by each Member and Associate Member on joining the Institution, which sum shall be in lieu of the dues for the first year of membership, and on the first day of each calendar year, thereafter, a sum of not less than *Two Dollars (\$2)* shall be paid as annual dues. Annual dues commence on January 1st in each year.